

Symposia Abstracts of the 2024 SAA 89th Annual Meeting, New Orleans, Louisiana

The ANNUAL MEETING of the Society for American Archaeology provides a forum for the dissemination of knowledge and discussion. The views expressed at the sessions are solely those of the speakers and the Society does not endorse, approve, or censor them. Descriptions of events and titles are those of the organizers, not the Society.

[1] Symposium · EQUITY IN THE ARCHAEOLOGY OF DISASTER, PAST, PRESENT, AND FUTURE

Ongoing experiences with severe weather events, global environmental change, war, and epidemic disease demonstrate that impacts of disasters are rarely distributed equitably. Marginalized communities tend to be the most vulnerable and may have limited capacities to recover. Similarly, cultural heritage, tangible and intangible, is subject to damage and destruction during disasters and disaster response. But is everyone's heritage at equal risk, and who defines what heritage is? This forum explores intersections of disaster and equity in archaeology. What have we learned about relationships among inequality, vulnerability, and resilience in past societies? How have disasters, and responses to them, affected social inequality? Under the rapid pace of modern disaster response and recovery, whose heritage is preserved and whose is sacrificed? Whose voices are considered during disaster planning when it comes to the protection of archaeological sites, collections, and cultural landscapes? And finally, what lessons from past disasters would improve the equity of disaster preparedness and recovery today? Although these issues and interests have global significance in archaeology, they have particular salience in New Orleans and the Gulf South, where disasters, preparedness, recovery, and aftermath have been recurrent and will continue to affect future generations.

[2] Symposium · AI-PROOF LEARNING: FOOD-CENTERED EXPERIMENTAL ARCHAEOLOGY IN THE CLASSROOM

The session aims to discuss ways to engage students in hands-on, high-impact learning while delving into the captivating world of culinary archaeology. Food and cooking are a shared human experience and can be an essential entrée for students into understanding the skill, decision-making, and challenges past people navigated. Bring us your baked, boiled, and butchered! The session will provide a platform to share successes and lessons related to food-themed activities for students at various levels and modalities, with an eye for how these activities may help colleagues seeking to replace or reform assessments (exams, essays, online discussions, etc.) whose evaluation is problematized by AI text generators. We encourage you to contribute your expertise around the following themes: (1) Food-related Experimental Archaeology and Teaching Research Design for early undergraduate, late undergraduate, and postgraduate levels. How can we use food in the classroom as a lens to teach the research design? How can we use it to humanize and teach about social structures, technology, trade networks, and cultural identities of different periods? (2) Integrating AI-Proof (or AI-Cooperative!) Approaches. With the increasing integration of AI in education, many instructors are rethinking their usual assignments, presenting new opportunities for engagement.

[3] Symposium · “THE SOUTH ALSO EXISTS”: THE CURRENT STATE OF PREHISTORIC ARCHAEOLOGY IN BRAZIL: DIALOGUES ACROSS DIFFERENT THEORETICAL APPROACHES AND RESEARCH AGENDAS

The Brazilian archaeological record is greatly diverse and reflects widely different periods of colonization and occupation of several diverse biomes associated with a heterogeneous social complexity throughout time and space. In the last decades, many different theoretical frameworks, as well as many various methodological approaches, have been successfully applied in Brazilian archaeology to explore further traditional questions regarding cultural and biological diversity, chronology, landscape, and resource use, as well as to strengthen the dialogues between these themes and traditional communities' practices. This symposium aims to present the current theoretical diversity used to approach the abovementioned research topics and promote a conversation about the intersection among different theoretical and methodological approaches.

[4] Symposium · US ARMY CORPS OF ENGINEERS: CURRENT WORK IN CRM, RESEARCH, AND CREATIVE MITIGATION

The US Army Corps of Engineers (Corps) is one of the nation's oldest federal agencies. The Corps has multiple missions, including navigation improvement, erosion and flood control, military construction, emergency response, and authorization of work and structures in waters of the United States. Due to the

diversity of its missions and regional specificities, there is an equally diverse amount of work conducted by Corps archaeologists and cultural resource managers that includes working with many different stakeholders, ranging from private individuals to federally recognized tribes to state and federal agencies. This session explores some of the Corps' current work, including ongoing compliance with Section 106 and Section 110 of the National Historic Preservation Act of 1966, as amended; archaeological investigations; and development of creative mitigation alternatives.

[5] Symposium · UNDERWATER MAYA: ANALYTICAL APPROACHES FOR INTERPRETING ANCIENT MAYA ACTIVITIES AT THE PAYNES CREEK SALT WORKS, BELIZE

The remarkable preservation of pole and thatch buildings below the seafloor allows for an opportunity to investigate the organization of households at an ancient Maya salt industry known as the Paynes Creek Salt Works, Belize. Papers in this session will focus on the abandoned and inundated salt works that were preserved by sea-level rise and red mangrove peat. Chemical analysis of marine sediment has found patterns associated with buildings as well as plazas that support the interpretation that some of the buildings are residences. Brine was enriched outside of salt kitchens. The only two salt works above sea level aid in the reconstruction of activities inside and outside of wooden buildings. Analysis of marine sediment using loss-on-ignition provides information regarding the rate of sea-level rise and activities that occurred inside and outside of wooden buildings. The Paynes Creek Salt Works were integrated into the Classic Maya economy through trade and exchange as evidenced by stone tool analysis.

[6] General Session · PUBLIC AND COMMUNITY ARCHAEOLOGY

[7] Symposium · COMMUNITY-ENGAGED BIOARCHAEOLOGY: CENTERING DESCENDANTS

(SPONSORED BY BIOARCHAEOLOGY INTEREST GROUP [BIG])

An engaged bioarchaeological project includes Indigenous or descendant communities from the start of the project, centering their questions and bringing forward their knowledge of the past with that of the anthropologists. This model creates deeper, more nuanced conversations about their ancestors. The engaged bioarchaeological projects presented here all center Indigenous and descendant questions in different contexts (landscapes, geographies, cultures), intertwining their voices and stories with the gathering of information from ancestral and cultural remains resulting in broader understandings of the past. Each paper offers a glimpse into the different ways descendant communities can and do engage with bioarchaeological research projects. In some cases, the research is initiated by the community, and in others the bioarchaeologists seek out the descendant community for their input and questions, to guide the research. No matter the origin of the initiation, what is revealed here is the ways in which we can reframe our work to be inclusive of the knowledge of the descendant community. Further, many of these projects also reveal how community-engaged bioarchaeological projects are decolonizing practices and working toward restorative justice by recalibrating how knowledge is produced and who benefits from the work.

[8] Symposium · IN SEARCH OF SOLUTIONS: EXPLORING PATHWAYS TO REPATRIATION FOR NAGPRA PRACTITIONERS (PART I)

(SPONSORED BY THE COMMITTEE ON REPATRIATION)

Now in its fourth decade, the Native American Graves Protection and Repatriation Act (NAGPRA) remains one of the most important legislative acts shaping the discipline of archaeology today. To adequately discuss the range of topics and provide examples and case studies incorporating shifting discourses of repatriation, policies, and collections management concerning Ancestors and their belongings subject to NAGPRA, the Committee on Museums, Collections, and Curation and the Curation Interest group have arranged a five-part series. Practitioners across the discipline work to respectfully return the Ancestors and cultural heritage of Indigenous nations, tribes, and communities, often without specialized training, and frequently without sufficient financial, administrative, or political institutional support. Collections professionals, especially, are expected to become instant NAGPRA experts, simply because their day is spent in curation spaces within which Ancestors and their belongings reside. Collections professionals contend with institutional pressure

balanced against the importance of carrying out the law in a respectful manner, attempting to mitigate further trauma to Indigenous Peoples, and they must do so, often, while learning the law themselves. This session discusses past experiences of current practitioners, highlights challenges, and offers potential solutions to those and similar challenges that new and existing practitioners alike may face.

[9] General Session · PALEOAMERICAN SITES AND ARTIFACTS ACROSS THE AMERICAS

[10] Forum · HOW TO WIN DEANS AND INFLUENCE STUDENTS: “SELLING” YOUR ARCHAEOLOGY PROGRAM TO UNIVERSITY STAKEHOLDERS

(SPONSORED BY CURRICULUM COMMITTEE)

The need to provide more relevant professional training for archaeology students has been a frequent theme at the SAA annual meetings. In today’s evolving economic and academic landscape, it is essential to find innovative ways to “sell” archaeology as a compelling discipline and viable career track to both university deans and students. Yet academic bureaucracies can be difficult to navigate and governing bodies resistant to change. Updating syllabi for individual classes is a good start, but in many cases, more fundamental change is needed to allow archaeology programs to continue to be relevant. This conference panel aims to explore strategies and insights for promoting archaeology within higher education institutions. Coming from a range of professional contexts, our panelists will discuss the challenges and opportunities in convincing university deans of the value of archaeology programs, as well as engaging and inspiring students to pursue archaeological studies. Key topics to be addressed include communication strategies, curriculum innovation, and collaborative initiatives to create career pipelines for students. By examining these strategies and drawing on real-world experiences, this panel aims to provide a comprehensive guide for effectively selling archaeology to university decision-makers and inspiring the next generation of archaeologists.

[11] Forum · RECONSIDERATIONS OF EPICLASSIC AND POSTCLASSIC MIGRATIONS IN MESOAMERICA

After the collapse of Teotihuacan in the mid-to-late sixth century CE, large-scale migrations became recurring features in the realignments and adjustments of the sociopolitical landscape of Mesoamerica during the Epiclassic and Postclassic periods. A number of independent research projects conducted in several different regions, at various scales, and incorporating multiple lines of evidence have established the historical reality of these migrations. Decades of coordinated research combining data and interpretations from archaeology, ethnohistory, epigraphy, linguistics, biological anthropology, and earth sciences have contributed to empirical knowledge of ancient migrations throughout Mesoamerica during these crucial time periods. The forum panel includes leading authorities and active participants in the development of this research. Their discussion will highlight current understandings and identify important questions that we need to address in future research on ancient Mesoamerican migrations. Common threads include the impact of climate change and natural disasters as migration triggers, the possible role of religious cults, migrations as both causes and effects of sociopolitical collapse and other forms of disruption, the effects of migrations on changing trade routes and other economic patterns, the impact of migrations on ethnic identities and political affiliations, and the interplay of these factors with material culture.

[12] Symposium · ARCHAEOGASTRONOMY: GROCERY LISTS AS SEEN FROM A MULTIDIMENSIONAL PERSPECTIVE

From an archaeological perspective, studying food and food processing is a complex task that requires specialized tools and techniques. The development of new techniques, or new applications of well-established techniques, to apprehend the transformation of ingredients (plants, animals) into complex foods has permitted scholars to deepen their understanding of the ingredients used and also the manner in which foods were prepared in the past. In this session, entitled “Archaeogastronomy: Grocery Lists as Seen from a Multidimensional Perspective,” we wish to bring together scholars working in different parts of the world and on different periods to present their recent advances. We hope this session will stimulate future research and new collaborations.

[13] Symposium · PAISAJES ARQUEOLÓGICOS DE PAÑAMARCA: FINDINGS FROM THE 2018–2023 FIELD SEASONS

This symposium will present the work of four field seasons of ongoing work at the site of Pañamarca, Nepeña Valley, Peru. Pañamarca contains an array of adobe monumental platforms, walls, and temples. The first mural discoveries at the site were revealed to the world in the 1950s, which included a famous mural of a Moche priestess. Recent work has focused on defining the cultural chronology of the site through AMS dating, exploring the farming landscape of the surrounding valley, and excavation, conservation, and documentation of remarkably preserved painted architectural surfaces dating to the Moche period (500–850 CE). Overall, the new discoveries confirm that the site played an important role in the region well before and after Moche presence. The work also supports our theory that during the Moche period, Pañamarca was a place of unusual creativity and a crucible for artistic invention. The artists and patrons of Pañamarca did not conform to what otherwise is thought to have been a very rigid society and artistic Moche style.

[14] Symposium · LEVELING UP: GAMING AND GAME DESIGN IN ARCHAEOLOGICAL EDUCATION AND OUTREACH

Recent pedagogical research has shown that “flipping the classroom,” or shifting education from an emphasis on traditional lectures and exams to more active, student-led projects, improves morale and information retention. Beyond the classroom, interactive projects are useful tools for engaging with the public and specific stakeholders about cultural heritage. While some lecture content is necessary and valuable, these higher-impact practices can help archaeological professionals bridge educational gaps and reach wider audiences than ever before. This symposium explores several applications of gaming and game design (broadly conceived) for archaeological education and outreach. Discussing topics such as analog role-playing games, tabletop games, video games, virtual reality, and even “gamified” syllabi and course structures, these presentations consider a few ways we might employ gaming to foster fun, engaging interactions with students and the public.

[15] Symposium · HOOD ARCHAEOLOGIES: IMPACTS OF THE SCHOOL-TO-PRISON PIPELINE ON ARCHAEOLOGICAL PRACTICE AND PEDAGOGY

The literature on equity in archaeology and related human resource DEI initiatives are seeing a steep rise in efforts to understand intersectionality among professional archaeologists and to use that knowledge to build a more inclusive discipline. While those efforts typically serve to benefit archaeology, exploration of the intersection between BIPOC identities and socioeconomic class among archaeologists is curiously absent. We ask a few questions in that vein, including: Why are so few archaeologists interested in exploring the intersection between ethnicity and class among practitioners in our discipline? How do the personal and professional experiences of ethnically and socioeconomically marginalized archaeologists compare to those of their peers in academic archaeology, CRM, and museum contexts? In what ways does the intersection between BIPOC identity and familial poverty shape one’s career pathways, peer relationships, practices, and pedagogies? We believe those are questions best answered by hood archaeologists, practitioners whose BIPOC identities originate in the projects, Section 8 clusters, the rez, the barrio, the trailer park, or the encampment and who grew up in low-income households where the school-to-prison pipeline loomed large. We bring together a professionally diverse group of those archaeologists to do so, including faculty, graduate students, CRM professionals, and museum personnel.

[16] Symposium · INDIVIDUALS KNOWN AND UNKNOWN: CASE STUDIES FROM TWO BURIAL CONTEXTS AT COLONIAL WILLIAMSBURG

Encountering human remains during archaeological excavations within the historic area of Colonial Williamsburg is not uncommon. As ethical and methodological considerations for the archaeological treatment of human remains and cemeteries have evolved, two recent projects in Williamsburg have presented an opportunity to conduct research and engage descendant communities within new frameworks. This session will explore two projects dealing with burials from contexts that couldn’t be more different: the cemetery of one of the oldest Baptist churches established by African Americans and a mass grave for Confederate casualties near the city’s powder magazine. One project was initiated by the descendant community of the First Baptist Church of Williamsburg while the other was conducted out of necessity to remove human remains from areas to be impacted by restoration work. Papers will discuss the

archaeological and osteological findings, our differential abilities to identify individuals, the opportunities and challenges of DNA analysis, the role conservators and curators can play in providing humanizing details through material remains, and our efforts to empower the appropriate descendant communities. The ultimate outcome of these projects is to appropriately restore the humanity to the individuals buried at these sites.

[17] Symposium · WORLD-SYSTEMS AND GLOBALIZATION IN ARCHAEOLOGY: ASSESSING MODELS OF INTERSOCIETAL CONNECTIONS 50 YEARS SINCE WALLERSTEIN'S "THE MODERN WORLD-SYSTEM"

2024 marks 50 years since the publication of Immanuel Wallerstein's seminal volume on world-systems theory (WST). Wallerstein focused on the emergence of the capitalist world-system in the sixteenth century, but his model attracted the attention of archaeologists, historians, and others who applied the approach to precapitalist societies. Through reconfiguring of concepts such as core, periphery, semi-periphery, and incorporation, and the development of additional elements, most notably globalization, these researchers expanded the application of WST to periods reaching far back into antiquity. WST has evolved into a broader paradigm encompassing theories that share a focus on intersocietal interaction and the myriad ways that is expressed in the political, economic, social, and religious spheres. The term world-systems analysis (WSA) has been adopted to describe this more expansive perspective. In addition to the concepts developed by Wallerstein, Frank, Hall, Chase-Dunn, and others, notions concerning globalization, the nature and function of frontiers, network analysis, small worlds, and deep history have come to play major roles in WSA. This session examines the status of WSA and related approaches as frameworks that explain cultural conditions through time. Participants explore such linkages in East and Central Asia, Europe, Africa, and the Americas and also consider future directions.

[18] Symposium · SOCIAL ARCHAEOLOGIES AND ISLANDS

Island archaeology has advanced significantly during the past two decades, from exponential increases in empirical data to new theoretical breakthroughs, particularly in ecological and evolutionary approaches. While these bodies of knowledge are essential for understanding islands, a predominance of "scientific" theoretical frameworks for interpreting islands could be complemented by more social understandings of life on islands in the past, with implications for islander presents and futures. Island studies in general have moved from using islands as laboratories to research of islands and islanders on their own terms. From the early 2000s the field of island studies has been growing vastly, mainly due to multidisciplinary studies of current global issues and phenomena from the perspective of islands and islanders. The studies of past island life and islanders' maritime relationships can contribute in major ways to understanding current sustainability issues and conservation strategies. This session brings together perspectives from islands around the world to engage with the diversity of social archaeologies that emerge from the perspective of smaller and larger landmasses surrounded by rivers, lakes, seas, and oceans. The session highlights engagement with the water itself as a medium of human experiences in the past as they link to the present.

[19] Symposium · RESOURCES AND SOCIETY IN ANCIENT CHINA

The connection between society and resources does not involve a deterministic relationship whereby resources directly and inevitably determine social organization, benefit, and survival. Instead, the relationship entails a dialectic, and social forces exert an impact on, and sometimes completely determine aspects of the use of resources and their distribution. In archaeological contexts, various subjects have been explored concerning the interaction between resources and society. The deep history of societies in East Asia and the diversity of associated resources provide a unique opportunity for studying the interaction between resources and society in the past, present, and future. By bringing together the recent archaeological work on a wide range of topics and approaches, including metals, ceramics, lithics, animals, plants, and various other forms of natural and social resources, this session hopes to provide a more comprehensive understanding of resources and society in ancient East Asia.

[20] Symposium · AMERICAN FORAGERS: HUMAN-ENVIRONMENTAL INTERACTIONS ACROSS THE CONTINENTS

The Americas exhibit a massive range of environmental settings and hunter-gatherer lifeways that are often considered at a regional level. However, consideration of archaeological records more broadly across different ecologies and regions is essential for understanding the relationship between environmental variables and human behavior. Exploring the archaeological records of diverse North and South American landscapes in relation to each other facilitates the exploration of topics such as cultural transmission, mobility and migration, resource exploitation, and the ways that humans' adaptation to their local environments shaped the archaeological record we study today. By considering the many manifestations of the foraging economy in the Americas, this session will strengthen our ability to make cross-regional comparisons for continents unique for their relatively recent peopling. This symposium brings together early-career and established scholars to present research on forager-environmental interactions in regions across the Americas, including the Arctic, the Andes, the Great Plains, the Colorado Plateau, the Great Basin, the North American Southeast, and Patagonia. Discussion at this level will demonstrate the importance of considering different regions in relation to each other when interpreting past human behaviors.

[21] Symposium · MISINFORMATION AND MISREPRESENTATION PART I: RECONSIDERING "HUMAN SACRIFICE," RELIGION, SLAVERY, MODERNITY, AND OTHER EUROPEAN-DERIVED CONCEPTS

This session examines how European-derived analytical concepts that have gained academic legitimacy and given rise to particular methods of understanding have fostered misleading claims, ideas, images, and narratives about ancient Mesoamerica. The presentations reconsider and reevaluate concepts that have gained ground as valid sources of insight into conditions, motivations, and representations in civilizations and societies of the past. Although Mesoamerica figures importantly in this session, the discussion of the prevalent use of European-derived analytical concepts and how usage impacts our understanding of ancient cultures is pertinent to all archaeologists working in non-European contexts.

[22] Symposium · NEW WORK IN MEDIEVAL ARCHAEOLOGY, PART I: LANDSCAPES, FOOD, AND HEALTH

In this first of two sessions presenting new work in medieval archaeology, papers focus on questions centered on landscape, food, and health as well as new methods and theoretical frameworks being developed to investigate these issues from Late Antiquity to the late Middle Ages in the lands stretching from the eastern Mediterranean to northwestern Europe.

[23] Symposium · STEPPE BY STEPPE: ADVANCES IN THE ARCHAEOLOGY OF EASTERN EURASIA

This session seeks to highlight the wide array of innovations in recent scholarship of the prehistory of eastern Eurasia. Any attempt to parse the complexity and variable scale of the social, biogeographical, ecological, and historical dynamics that interdependently shaped the archaeological record of eastern Eurasia requires continual development of practice and theory as well as the synthesis of many regional perspectives. With this in mind we provide a forum that puts scholars working across a range of regions, timespans, theoretical approaches, and methods into broader conversation. Topics include multispecies perspectives, trade and exchange, mobilities, paleoecology and human-environmental reconstruction, zooarchaeology, archaeobotany, spatial analysis, monumentality, biomolecular applications, metallurgical technologies, osteoarchaeology, foodways, and more. Here we feature research that highlights new archaeological case studies, new theoretical directions, and new analytical techniques. From the grassy expanses of the steppe to the back shelves of institutional collections, this session explores recent developments in the archaeology of eastern Eurasia and provides a window into the state of the field.

[24] Symposium · *SE NOT YOUR FATHER'S POVERTY POINT: REWRITING OLD NARRATIVES THROUGH NEW RESEARCH

Two decades ago, Weinstein et al. (2003:103) noted that "Poverty Point has been dug into, written about, and speculated about probably more often than any other site in Louisiana or the entire Lower Mississippi

Valley.” Since then, fieldwork and collections research at the Poverty Point site and, more broadly, at culturally affiliated sites in the US Southeast have continued to enhance our understanding of the Poverty Point cultural phenomenon. These recent and ongoing investigations explore questions about the landscapes, subsistence, material culture, and chronology of the Poverty Point culture. The data reveal new levels of complexity that challenge archaeological models of site development and indigenous lifeways during the Late Archaic period.

[25] Symposium · EMBODIED ESSENCE: ANTHROPOLOGICAL, HISTORICAL, AND ARCHAEOLOGICAL PERSPECTIVES ON THE USE OF BODY PARTS AND BODILY SUBSTANCES IN RELIGIOUS BELIEFS AND PRACTICES

Anthropological and historical research suggests that anatomical parts and bodily substances of humans and nonhuman animals (e.g., crania, mandibles, horns, blood, fat, brains, marrow) likely played an important role in the religious beliefs and practices of many past societies because they were considered to be imbued with spiritual power. That such is the case is not widely appreciated in archaeology at the moment, however. This is a problem not only because it means we are probably overlooking data that shed light on the religious beliefs and practices of a number of past societies, but also because it means we are probably misinterpreting some of the animal bones at some archaeological sites: we are interpreting the bones in terms of economic behavior when they were actually deposited in connection with religious rituals. The present symposium’s goal is to begin the process of changing this state of affairs. The symposium brings together several of the most prominent of the small group of researchers currently working on the phenomenon of the religious use of anatomical parts and bodily substances with a view to identifying commonalities and differences among the societies and archaeological cultures in which it has been documented and stimulating collaborative research.

[26] Symposium · ARCHAEOLOGIES OF SURVEILLANCE: SEEING AND POWER IN THE MATERIAL WORLD

Surveillance—the act and apparatus of observation—is a key fixture in the behaviors and materials of human societies. While narratives of power, authority, domination, and resistance feature prominently in the literature, surveillance remains undertheorized in archaeology. This relative lack of attention is perhaps because articulations of surveillance in other contexts, such as Bentham’s panopticon and Foucault’s essays on power and knowledge, were explicitly modern in their conception and application. Nevertheless, the social significance of watching and being watched is also apparent in the archaeological record of many premodern societies, especially states and empires. This session presents case studies on the archaeology of surveillance from a variety of disciplinary and societal contexts. In particular, it aims to examine the materiality and landscapes of surveillance. What are the material culture correlates for watching and, equally important, for the watched? Where and when do human groups invest in the architecture of surveillance and what effects can be detected or inferred from such investments? Where are material vestiges of surveillance conspicuous in their absence? By examining the conditions of surveillance (forced labor, borderlands, colonialism, imperialism, bureaucracy) in a number of global contexts, we also demonstrate how archaeology can contribute to broader dialogues in surveillance studies.

[27] Symposium · CHAVÍN DE HUÁNTAR’S CONTRIBUTION TO UNDERSTANDING THE CENTRAL ANDEAN FORMATIVE: RESULTS AND PERSPECTIVES

Chavín de Huántar is an important Middle-Late Formative site (1200–500 BC) of the north-central highlands of Peru, recognized for its precocious worked stone monumental construction, enigmatic architectural forms including subterranean galleries, and extensive stone art that decorated many architectural contexts. The site’s primary function was religious, judging from the elaborate development of ritual contexts and material culture. The Programa de Investigación Arqueológica y Conservación en Chavín de Huántar began in 1994, addressing the multidimensional complexity of the site. Its transdisciplinary research marked a significant shift in the generation of knowledge about the emergence of authority in the Andes. Greater understanding of previously known contexts and discovery of new ritual spaces have revealed an iconic tradition marked by both continuity and innovation. Detailed excavations of galleries, including those in the Atrium of the Circular Plaza, have sophisticated understanding of function and organization of the Chavín entity. Across 30 years of fieldwork and analysis a variety of locations in and around the monumental site have been investigated. This

session focuses on the Programa's new knowledge and research perspectives, reevaluating concepts of Andean Formative organization and its complexity, and questioning how or if the Formative was elemental in development of Andean states.

[28] Symposium · DEVELOPMENTS AND CHALLENGES IN LANDSCAPE ARCHAEOLOGY

The aim of this symposium is to present and discuss a series of papers that focus broadly on any new developments as well as pending challenges in the archaeological study of landscapes. More specifically, the presentations in this symposium seek to reflect on the overall aims of landscape archaeology, evaluate what kind of knowledge is generated by this subdiscipline, review and/or compare theoretical frameworks, identify and reflect on the role new technologies play in the study of landscapes (what and where is their impact), discuss current and future challenges, and determine its role and impact in society.

[29] Symposium · THE TIES THAT BIND: CORDAGE, ITS SOURCES, AND THE ARTIFACTS OF ITS CREATION AND USE

Cordage is typically the earliest fiber technology to develop in ancient societies, and it tends quickly to form the basis of most constructed interworked fibrous textiles and fabrics. Nevertheless, cordage has continued to exist and function independently of textiles in a wide variety of roles, as in the rope, yarn, and string used for wrapping, binding, and transporting, as well as for rigging, torques, quipus, nets, and other cordage-based tools and devices. In contexts where the cordage no longer survives, the presence of cordage technology is revealed by the presence of tools for making cordage, including spindles, whorls, and rope spinners, and by the presence of paraphernalia that relies on cordage, such as netting gauges, cleats, moorings, slings, harpoons, and suspended objects. This session explores the enduring production, function, and meaning of cordage in ancient through contemporary societies worldwide.

[30] Symposium · BRIDGING TIME, SPACE, AND SPECIES: OVER 20 YEARS OF ARCHAEOLOGICAL INSIGHTS FROM THE CAÑONCILLO COMPLEX, JEQUETEPEQUE VALLEY, PERU, PART I

Long-term research in the Cañoncillo Archaeological Complex on the north coast of Peru, conducted by an international, collaborative team of archaeologists, has offered important insights into changing social organization, political structures, and ritual practices over the last 2,000 years in the ancient central Andes. Situated on the southern margin of the Jequetepeque Valley, the complex includes over 25 km² of monumental architecture, domestic zones, relict fields, and abandoned canals dating from the Formative period to the Spanish colonial era. Sustained archaeological analysis of well-preserved contexts has facilitated analysis of macroscale sociocultural processes that unfolded across the central Andean region. Indeed, the Jequetepeque Valley, the "Crossroads of Empire," marks an important contact zone between the highlands and the coast and between the northern and southern Moche regions, offering alternative perspectives on dominant archaeological narratives. In this session, we focus on the Late Formative, Late Moche, Transitional (Early Lambayeque), and Late Intermediate period components, examining ritual modes of place-making, intergenerational memory, variable materializations of house and home, and differential enactments of kinship and collectivity. By juxtaposing data from different time periods, we situate sociopolitical transition as an agent-driven process and understand human efforts to build bridges across time, space, and species.

[31] Symposium · NEW AND EMERGING PERSPECTIVES ON THE BAJO EL LABERINTO REGION OF THE MAYA LOWLANDS, PART I

The Bajo el Laberinto region of the Maya lowlands was an important locus of cultural development, continuities, and transformations for over two millennia. Beginning around the time of the earliest sedentary communities and extending through to the Postclassic period, the Maya of this region established and developed communities along the margins of bajos (karst seasonal wetlands), transforming and managing complex and diverse landscapes to meet the demands of urban populations. During the Preclassic (900 BCE–200 CE), autonomous cities such as Yaxnohcah and Calakmul flourished in this sociospatial landscape. However, by 450 CE, Calakmul emerged as the center of a network of economically integrated urban settlements, ultimately becoming one of the largest cities in Mesoamerica and the most politically significant and influential Maya city from 650 to 850 CE. Interdisciplinary investigations in this region have generated

robust data relevant to understanding the distribution of settlement, land use and water management strategies, and livelihood practices. More recently, new avenues of research have focused on continuities and disruptions in urban landscapes and social, political, and economic dynamics. This two-part symposium explores these themes, with contributors presenting findings and interpretations from new, ongoing, and recently completed work in the Bajo el Laberinto region.

[32] General Session · MAYA MONUMENTS AND ARCHITECTURE

[33] General Session · ARTIFACT STUDIES AND SOCIAL ANALYSIS IN NORTH AMERICAN ARCHAEOLOGY

[34] General Session · BIOARCHAEOLOGY AND MORTUARY ANALYSES IN MESOAMERICA

[35] General Session · PALEOAMERICAN RESEARCH IN WESTERN NORTH AMERICA

[36] General Session · ENVIRONMENTAL ARCHAEOLOGY IN THE AMERICAS

[37] General Session · ANDEAN MATERIALS AND MUSEUM RESEARCH

[38] General Session · PUBLIC-FACING ARCHAEOLOGY

[39] Forum · IN SEARCH OF SOLUTIONS: EXPLORING PATHWAYS TO REPATRIATION FOR NAGPRA PRACTITIONERS (PART II)

(SPONSORED BY COMMITTEE ON MUSEUMS, COLLECTIONS, AND CURATION)

Now in its fourth decade, the Native American Graves Protection and Repatriation Act (NAGPRA) remains one of the most important legislative acts shaping the discipline of archaeology today. To adequately discuss the range of topics and provide examples and case studies incorporating shifting discourses of repatriation, policies, and collections management concerning Ancestors and their belongings subject to NAGPRA, the Committee on Museums, Collections, and Curation and the Curation Interest Group have arranged a five-part series. This forum brings together practitioners from different agencies, as well as tribal collaborators, to engage in dialogue concerning the need for NAGPRA policies enacted and carried out at different institutional levels to ensure that the legislation is being followed in a true consultative, transparent, and respectful manner. Moreover, we discuss the need for policies that go beyond NAGPRA legislation. This includes, but is not limited to, policies concerning traditional care practices, curation and collection management, and research access that are developed out of truly collaborative relationships between archaeologist, museum and governmental agencies, and Indigenous communities, tribes, and nations.

[40] Forum · AIRLIE HOUSE REVISITED: ENVISIONING NEW DIRECTIONS FOR CRM ARCHAEOLOGY

(SPONSORED BY SAA PRESIDENT)

The National Historic Preservation Act of 1966 set the course for archaeology in the United States. The SAA and National Park Service's 1977 report entitled "The Management of Archaeological Resources: The Airlie House Report" brought cultural resource management to the fore and continues to influence it. However, as we enter the third decade of the twenty-first century, archaeology is facing new challenges not foreseen in the Airlie House Report. In recent years the profession has changed, guided by newer laws and regulations, technological innovations, a curation crisis, and social issues such as climate change, environmental justice, the rights of Indigenous and descendant communities, and Traditional Ecological Knowledge. These changes and innovations are affecting how archaeology is practiced today. Further, necessary changes to professional training and a projected shortfall in workforce capacity pose additional challenges. We have urgent work to do to ensure that cultural resource management and the discipline writ large reflect and are responsive to these changes. This forum seeks to discuss major topics affecting our profession in the coming decades, led by facilitators in the Airlie House Revisited workshop to be held in May 2024.

[41] Poster Session · ARCHAEOOMETRY AND MATERIALS ANALYSIS PART I: NORTH AMERICA**[42] Poster Session · ARCHAEOOMETRY AND MATERIALS ANALYSIS PART II: MESOAMERICA, SOUTH AMERICA, AND WORLDWIDE****[43] Poster Session · IT'S NOT ALL ANCIENT HISTORY: HISTORICAL ARCHAEOLOGY PART II****[44] Poster Session · IT'S NOT ALL ANCIENT HISTORY: HISTORICAL ARCHAEOLOGY PART I****[45] Poster Session · BRIDGING GAPS: CONNECTING LEARNERS WITH ARCHAEOLOGICAL RESOURCES DURING COVID AND BEYOND**

(SPONSORED BY TEACHING ARCHAEOLOGY INTEREST GROUP)

The coronavirus pandemic altered the state of education, outreach, and learning, resulting in a shift in teaching from classrooms, museums, and other physical locations to remote and hybrid modalities. In the wake of the pandemic, educators have bridged gaps created by limited face-to-face contact to reach out to students, communities, and the public. This session presents the challenges, successes, and lessons learned in archaeology education, as they pertain to teaching, collaboration, and outreach during COVID and moving into the post-pandemic years.

[46] Poster Session · MAKING HISTORICAL ARCHAEOLOGY MATTER: RETHINKING AN ENGAGED ARCHAEOLOGY OF NINETEENTH- TO TWENTY-FIRST-CENTURY RURAL COMMUNITIES OF WESTERN IRELAND AND SOUTHERN ITALY

This poster symposium brings together researchers from the Cultural Landscapes of the Irish Coast project and the Bova Marina Archaeological Project, southern Italy, to facilitate a broader discussion and comparison of rural communities in two different settings: the western Irish coast and southwestern Calabria of Italy. Although many surface differences exist—chiefly climate and environment—deeper similarities may reveal themselves when archaeologists embed themselves in local communities and seek to work with community members to tell broad stories about life, sustenance, and continuity and change in local ways of life. How do people in these communities relate to and manage their local tangible and intangible heritage practices? How did people work together in largely self-sustaining ways to build livelihoods? How are these communities affected by processes of globalization, modernization, and out-migration? This session aims to start a dialogue between two groups of researchers in order to elucidate these and other questions related to rural coastal livelihoods over the past two centuries.

[47] Poster Session · ARCHAEOLOGICAL FUTURES THROUGH A VIRTUAL PAST

This session illustrates the usefulness of 3D and immersive archaeological storytelling strategies for public engagement, collaborative research, and experiential education. Archaeologists are increasingly relying on Augmented Reality (AR), Virtual Reality (VR), 3D modeling, video game design, and photogrammetry to preserve and dynamically visualize archaeological contexts, data, and narratives. Through diverse strategies of sensorial engagement, inaccessible contexts and objects become globally available on personal devices or public web-based experiences. This poster session provides innovative examples of the ways in which archaeologists deploy virtual methods to create opportunities for accessible exploration and intimate engagement with material culture and historical landscapes. Session participants will demonstrate the future of archaeological methods through play and experimentation within virtual pasts.

[48] Poster Session · SMALL DWELLINGS ON THE VIKING FRONTIER: NEW RESEARCH FROM KOTIÐ, NORTH ICELAND

Excavations at Kotið in 2022 and 2023 have revealed a very small, Viking Age domestic dwelling that dates to the initial settlement of Iceland in the late ninth century. Compared to known settlement farms, the site is significantly smaller and lacks access to good farmland even though better land was unoccupied at the time.

The site suggests an important social and ecological role for non-elite households in the Icelandic settlement process and requires a new consideration of inequalities and complex relationships among early settler households on the Norse frontier. This poster symposium presents data from multiple aspects of the excavation, including geoarchaeology of the domestic floors and extramural spaces, material culture of adornment items, zooarchaeology and paleoethnobotany, later reuse of the site as agricultural infrastructure, and artistic visualization of the dwelling.

[49] Poster Session · POSTERS ON THE ARCHAEOLOGY OF THE SOUTHERN YUKON-ALASKA BORDERLANDS

This session collects posters related to the archaeology of the Southern Yukon-Alaska Borderlands (SY-AB). The SY-AB is here defined as the region north and south of the Alaska Highway and east and west of the international border for about 100 km. It encompasses the highway corridor from the north end of Kluane Lake, Yukon, to the Tanacross, Alaska, regions, with the Wellesley Basin/Yukon-Tanana uplands to the north and the St. Elias–Wrangell Mountain range to the south. It includes Pleistocene southeast Beringia glaciations and fauna, and sites of human occupation in the Allerød and Younger Dryas through the Holocene and historic periods. The posters focus on detailed presentations of quantitative data such as collections of radiocarbon dates and statistical summaries of artifact and fauna inventories, or any topic that is enhanced by consideration of graphical representations. A related presentation symposium is also scheduled (Session ID: 5937).

[50] Poster Session · TWENTY YEARS OF ARCHAEOLOGICAL SCIENCE AT THE FIELD MUSEUM'S ELEMENTAL ANALYSIS FACILITY

Since 2004, the Elemental Analysis Facility at the Field Museum has conducted advanced research projects in archaeological chemistry to study research on trade and exchange, examine craft production, and assess the nature of archaeological materials. Housed in one of the world's great natural history museums, the labs promote research on museum collections but also on objects from collaborating institutions and researchers. Applications from techniques including laser ablation–inductively coupled plasma–mass spectrometry and portable X-ray fluorescence have been instrumental in this work. Collaborative projects have ranged from explorations of glass bead production and exchange to sourcing earthenware ceramics and the development of portable laser ablation systems. Dozens of publications and large databases have been built, the latter of which provide for large-scale comparative analysis of exchange systems on continental scales. The posters presented in this session fulfill the spirit of the EAF showcasing the results of some of its recent projects.

[51] General Session · ASIAN SUBSISTENCE AND FOODWAYS

[52] General Session · ARCHAEOLOGY OF THE AMERICAN SOUTHWEST

[53] General Session · COASTAL ANDEAN SOCIETIES

[54] General Session · AMAZONIAN SOUTH AMERICA

[55] General Session · ENVIRONMENTAL ARCHAEOLOGY IN AFRICA

[56] Symposium · STATES, CONFEDERACIES, AND NATIONS: REENVISIONING EARLY LARGE-SCALE COLLECTIVES

How did the world's first large-scale collectives come into being? For much of our discipline's history, the answer was the state: a centralized, hierarchical, political organization with a ruler who directed a command-and-control economy and held a monopoly on force. Scholars identified regions of pristine state formation and then tried to fit their case studies into a unified evolutionary model of culture change. This vision of the early state began to erode near the end of the twentieth century, as archaeological fieldwork revealed a diversity of political organizations that could not be easily shoehorned into the field's narrow expectations. The last three decades has seen a recalibration in studies of early large scale-collectives, both of those long deemed to qualify as states and others that did not. This session brings together perspectives from around

the world on the constellation of practices, institutions, and ideologies that allowed for shared identities and coordinated actions across broad collectives. Their work demonstrates that violence and hierarchies often played pivotal roles, but so did gender complementarity, markets, kinship, and egalitarianism. A better understanding of how large groups come together enables a richer understanding of our past and governance alternatives for a better future.

[57] Symposium · SUBMERGED PALEOLANDSCAPE INVESTIGATIONS IN THE GULF OF MEXICO

Changing sea levels have drastically changed the shape and amount of land available for habitation throughout human history. Using modern marine technologies, portions of these formerly exposed landscapes can be identified on or buried below the modern seafloor and data gathered to illustrate what life would have been like in these areas. This session will include papers that present the basis for and results of recent exploration along the northwestern Gulf of Mexico to map and illustrate these landscapes. These papers will summarize the results of predictive modeling, geophysical survey, geotechnical testing, and geoarchaeological analyses conducted offshore of the relict Sabine River Valley, on the Gulf of Mexico outer continental shelf. These papers will also address challenges associated with presenting submerged paleolandscapes research to various audiences and highlight opportunities to engage the next generation of explorers and archaeologists in this research.

[58] Symposium · EXAMINING SPATIAL-TEMPORAL VARIATION IN THE LITHIC TECHNOLOGY OF THE EARLY UPPER PALEOLITHIC

This session presents ongoing research into the lithic technology of the Swabian Aurignacian and invites researchers working in other regions to contribute to a discussion on how best to characterize lithic variability during the period roughly between 45 and 35 ka BP. Papers present case studies of lithic variability at various spatial and temporal scales in an effort to identify both unifying and distinctive aspects of Eurasian lithic traditions. In the Swabian case, the Upper Paleolithic begins suddenly following an occupational hiatus around 42 ka BP with the Aurignacian assemblages from the caves of the Upper Danube region. After decades of excavation and study, researchers are gaining a better understanding of lithic variability in this region. Clearly, both neighboring and far off regions show radically different sequences than in the Swabian case study. The archaeological record of the early Upper Paleolithic reflects distinctive processes of cultural evolution and different cultural trajectories during the period of the last archaic hominins and the spread of early modern humans into Eurasia. Following a comparative approach, we hope better to contextualize the local signatures within a more general model for the beginnings of the Upper Paleolithic.

[59] Symposium · MISINFORMATION AND MISREPRESENTATION PART 2: RECONSIDERING “HUMAN SACRIFICE,” RELIGION, SLAVERY, MODERNITY, AND OTHER EUROPEAN-DERIVED CONCEPTS

This second part of the session, “Misinformation and Misrepresentation,” continues to examine how European-derived analytical concepts that have gained academic legitimacy and given rise to particular methods of understanding have fostered misleading claims, ideas, images, and narratives about ancient Mesoamerica. The presentations reconsider and reevaluate concepts that have gained ground as valid sources of insight into conditions, motivations, and representations in civilizations and societies of the past. Although Mesoamerica figures importantly in this session, the discussion of the prevalent use of European-derived analytical concepts and how usage impacts our understanding of ancient cultures is pertinent to all archaeologists working in non-European contexts.

[60] General Session · ADVANCES IN ARCHAEOLOGICAL DATING AND CHRONOLOGY BUILDING I

[61] General Session · ADVANCES IN GIS APPLICATIONS TO ARCHAEOLOGY

[62] General Session · TALES OF SEVERAL CITIES: ARCHAEOLOGIES OF URBANISM

[63] Forum · CONTROLLED VOCABULARIES IN ARCHAEOLOGY

Do archaeologists need a controlled vocabulary? Controlled vocabularies are agreed, dynamic sets of single- or multiple-word phrases used as key research terms. These exist for other disciplines, including psychology, chemistry, and astronomy, with agreed sets of standardized keywords for journal articles. Existing archaeological vocabularies are partial and fragmented, while simultaneously archaeological research grows. More than 120,000 archaeological articles have been published since 1960, with the total number doubling every 10 years. By 2030 metadata will exist for more than 200,000 published documents. And this is a severe underestimate; no more than 30% of the literature is currently indexed in databases that are focused on publications in English and major journals. More importantly, this does not include metadata on research documents generated by CRM. A controlled vocabulary might ensure consistency of research descriptions and could be a step toward the development of a metadata database for all published research. But it is not without potential problems. We will discuss any aspects of the possible development or nature of a controlled vocabulary for archaeology. We will also consider existing vocabulary projects in archaeology, and potential issues or problems that might hinder the development and introduction of a controlled vocabulary.

[64] Forum · A PRACTITIONER'S GUIDE TO PUBLIC ARCHAEOLOGY: INTENTIONAL PROGRAMMING FOR EFFECTIVE OUTREACH

(CO-SPONSORED BY PUBLIC EDUCATION COMMITTEE; PUBLIC ARCHAEOLOGY INTEREST GROUP)

Many archaeologists learn by trial and error while developing public programs and events and are mostly unaware that others in the profession are undergoing similar challenges. Those who do public outreach are required to become jacks-of-all-trades, often with little funding, capacity, or pedagogical training. When planning an event, where do you begin? How do you improve your programming to make a stronger impact? Simply put, we don't know what we don't know. Realizing that it has been over 20 years since archaeologists created anything instructional about public outreach, a cohort of experienced archaeology educators came together to share our knowledge and learn from each other's strengths. We produced the forthcoming book, "A Practitioner's Guide to Public Archaeology: Intentional Programming for Effective Outreach," to assist others who create public programs with the process of planning, implementation, and assessment. In this forum, several authors provide an overview and preview of the book, including how to create intentional goals and outcomes; connect with your audience; identify resources, collaborators, and other logistical needs; and understand your impact. We examine challenges and considerations for all ages, K–12, and specialized community programming, and discuss the need for stronger communication among public archaeology practitioners.

[65] Forum · ALTERNATIVE MODALITIES: MULTIMEDIA APPROACHES TO ARCHAEOLOGICAL OUTREACH AND SCHOLARSHIP

Peer-reviewed journal articles and journal citation impact factors may dominate the concerns of more traditional archaeological scholarship. These metrics do not take into consideration alternative modalities, especially those that focus on outreach to members of the public—outreach that is part of our ethical guidelines. Alternative modalities—comic books, podcasts, blogs, museum exhibitions, documentaries/TV shows, TikTok videos, cosplay—have a broader reach than academic efforts. Yet, these alternative modalities are not without their challenges. This forum will explore some of these challenges but also emphasize the tremendous potential of alternative modalities for outreach and scholarship.

[66] Forum · NOT YOUR PARENTS' ARCHAEOLOGY: RESULTS AND IMPLICATIONS OF THE GAC'S 2023 SECRETARY OF THE INTERIOR'S STANDARDS AND GUIDELINES SURVEY

(SPONSORED BY SAA GOVERNMENT AFFAIRS COMMITTEE)

The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (Standards) were originally published in 1983 and have guided the trajectory of the cultural resource management (CRM) industry in the United States over the past 40 years. The US Department of the Interior (DOI) announced they are currently reviewing the Standards for revisions to the Professional Qualifications Standards. The SAA Government Affairs Committee (GAC) plans to use this opportunity to advocate to DOI for the accurate addressing of the archaeological community's concerns and contemporary practices in

the DOI's revisions. To ensure the GAC's advocacy efforts reflect the interests of US archaeologists, from August 9, 2023, to September 9, 2023, the GAC polled practicing archaeologists to determine the utility of the current Standards and how the Standards can be updated to better account for today's and tomorrow's CRM industry. The answers provided by over 1,050 professional archaeologists (both members and nonmembers of the SAA) will be used to guide the GAC's advocacy efforts. This forum's panelists will present the results of the survey, explain what they see in the results, and what the results mean for the future of archaeological practice in the United States.

[67] Poster Session · HUMAN RELATIONSHIPS WITH THEIR ENVIRONMENT AND CLIMATE

[68] Poster Session · BIOARCHAEOLOGY AND MORTUARY ANALYSIS PART I: ASIA AND EUROPE

[69] Poster Session · BIOARCHAEOLOGY AND MORTUARY ANALYSIS PART II: NORTH AMERICA AND MESOAMERICA

[70] Poster Session · BIOARCHAEOLOGY AND MORTUARY ANALYSIS PART III: SOUTH AMERICA AND WORLDWIDE

[71] Poster Session · PUTTING ARCHAEOLOGY TO WORK: EXPANDING CLIMATE AND ENVIRONMENTAL STUDIES WITH THE ARCHAEOLOGICAL RECORD

Interdisciplinary applications in environmental archaeology commonly use environmental records such as sea-level indicators, geochemistry, and geomorphological studies to interpret the human record. However, environmental studies rarely consider the archaeological record when modeling paleoclimate or reconstructing environmental histories. Yet, the archaeological record is rich with unique datasets that provide useful indicators of rates and magnitudes of environmental change. This poster session provides examples of the contributions of the archaeological record to larger questions of the environmental past and to modeling the environmental future, especially related to climate change impacts. Archaeological evidence sharpens the understanding of environmental response through scaled geographic and temporal studies of human migration events, settlement pattern shifts, site abandonment, and social reorientation. Archaeologists who can communicate this knowledge base in multidisciplinary contexts have the potential to shift the discussion so that cultural heritage becomes central to the scientific enterprise.

[72] Poster Session · IN SEARCH OF SOLUTIONS: EXPLORING PATHWAYS TO REPATRIATION FOR NAGPRA PRACTITIONERS (PART IV): NAGPRA IN POLICY, PROTOCOL, AND PRACTICE

(SPONSORED BY CURATION INTEREST GROUP)

Now in its fourth decade, the Native American Graves Protection and Repatriation Act (NAGPRA) remains one of the most important legislative acts shaping the discipline of archaeology today. To adequately discuss the range of topics and provide examples and case studies incorporating shifting discourses of repatriation, policies, and collections management concerning Ancestors and objects subject to NAGPRA, the Committee on Museums, Collections, and Curation and the Curation Interest Group have arranged a five-part series. NAGPRA impacts every sector of archaeological practice in the United States. Federal agencies and "museums," including state and local government agencies, universities, private institutions, and even cultural resource management firms, may be required to comply with the law by reporting, inviting consultation, and repatriating eligible collections. Federally recognized Indian Tribes must also follow specific procedures to regain their Ancestral remains and belongings. Many Tribes and institutions have developed NAGPRA policies to guide compliance, while a growing number of professional communities debate best practices for exceeding federal requirements. Yet numerous Tribes and institutions remain new to NAGPRA, and archaeological curricula frequently lack explicit training. This symposium circulates the latest policies, protocols, and practices that facilitate compliance alongside updates from the professional communities moving the field forward.

[73] Symposium · IN SEARCH OF SOLUTIONS: EXPLORING PATHWAYS TO REPATRIATION FOR NAGPRA PRACTITIONERS (PART III)

(SPONSORED BY CURATION INTEREST GROUP)

Now in its fourth decade, the Native American Graves Protection and Repatriation Act (NAGPRA) remains one of the most important legislative acts shaping the discipline of archaeology today. To adequately discuss the range of topics and provide examples and case studies incorporating shifting discourses of repatriation, policies, and collections management concerning Ancestors and objects subject to NAGPRA, the Committee on Museums, Collections, and Curation and the Curation Interest group have arranged a five-part series. This session discusses the long path to repatriation and the evolving needs of care for Ancestors and objects that fall under NAGPRA. While Western ideas about curation and acceptable archival practices may be partially adequate, it is necessary to incorporate Indigenous voices and decision-making into the everyday choices that are made regarding their cultural heritage. This is particularly relevant as proposed regulation changes to NAGPRA include language regarding an institution's duty of care to ancestral remains and cultural items. This session brings together a diverse array of voices to discuss how to respectfully curate this sensitive cultural heritage.

[74] Lightning Round · MULTISCALAR APPROACHES TO RECONSTRUCTING STRATEGIES OF CEREMONIAL INCLUSION THROUGH THE ACCESSIBILITY OF ARCHITECTURE IN THE MAYA LOWLANDS

Classic Maya (AD 300–900) architecture echoes the political and cultural decision-making of the social actors who commissioned these spaces. Specifically, the degrees of accessibility encoded within architectural layouts offer an avenue to examine the intentions of their sponsors. This lightning round focuses on variability in the accessibility of architecture from the Maya Lowlands at the inter- and intra-polity levels. We calculate an accessibility index, which uses the sum of architectural entryways (m) divided by the area of the site (m²), wherein higher index values represent greater accessibility. To assess the degree to which additional factors impacted architectural accessibility, we compare the accessibility index with variables such as the architectural volume of a site (m³), number of surrounding commoner house groups, size of the plazas, elevation, and nearby slope gradient. Comparisons of accessibility between sites at the apical and intermediate elite levels provide novel perspectives on the hierarchical use of plaza space, social control, privacy, and the diverse ritual activities that occurred in these spaces. Results of these analyses are presented from archaeological projects with comparable datasets across the Maya region, demonstrating the applicability of these methods and amplifying our understanding of human sociospatial organization across the different landscapes.

[75] Symposium · 13,000 YEARS OF ADAPTATION IN THE SONORAN DESERT AT LA PLAYA, SONORA

The La Playa archaeological site of northwest Sonora, Mexico, presents a well-preserved record of human land use from the Pleistocene to the historic period. The Early Agricultural period San Pedro and Cienega (1200 BCE–150 CE) phases are particularly well represented by burial, canal, and roasting pit features. These and other features have been the target of over two decades of research by transnational teams from the United States and Mexico. This session presents a cultural-historical account of the longue durée of human occupation at La Playa and the varied adaptations represented in the archaeological record. Issues of broad theoretical significance include human responses to climate change from the Pleistocene to Late Holocene, the emergence of sedentism and farming, the development of ritual and religious systems, the prevalence of violence, technological change, mobility and migration, and the formation of regional identities.

[76] Symposium · BRIDGING TIME, SPACE, AND SPECIES: OVER 20 YEARS OF ARCHAEOLOGICAL INSIGHTS FROM THE CAÑONCILLO COMPLEX, JEQUETEPEQUE VALLEY, PERU, PART 2

Long-term research in the Cañoncillo Archaeological Complex on the North Coast Peru, conducted by an international, collaborative team of archaeologists, has offered important insights into changing social organization, political structures, and ritual practices over the last 2,000 years in the ancient central Andes. Situated on the southern margin of the Jequetepeque Valley, the complex includes over 25 km² of

monumental architecture, domestic zones, relict fields, and abandoned canals dating from the Formative period to the Spanish colonial era. Sustained archaeological analysis of well-preserved contexts has facilitated analysis of macroscale sociocultural processes that unfolded across the central Andean region. Indeed, the Jequetepeque Valley, the “Crossroads of Empire,” marks an important contact zone between the highlands and the coast and between the northern and southern Moche regions, offering alternative perspectives on dominant archaeological narratives. In this session, we focus on the Late Formative, Late Moche, Transitional (Early Lambayeque), and Late Intermediate period components, examining ritual modes of place-making, intergenerational memory, variable materializations of house and home, and differential enactments of kinship and collectivity. By juxtaposing data from different time periods, we situate sociopolitical transition as an agent-driven process and understand human efforts to build bridges across time, space, and species.

[77] Symposium · CURRENT PERSPECTIVES ON HISTORICAL AND CONTEMPORARY ARCHAEOLOGY OF THE SOUTHERN CONE

A growing body of research in historical and contemporary archaeologies in southern South America has developed over the last decades. Novel issues are being discussed within different theoretical frameworks and methodological approaches. This symposium aims to integrate current trends in studies while articulating future lines of research. In general terms, the expansion of historical archaeology in South America has followed a path similar to that in the Global North, although with a more recent development. At first, an important part of the work focused particularly on the corroboration of data recorded in historical documents through the work on ruins, forts, and urban centers. Over time, these studies incorporated new frameworks and broader scales of analysis. Historical archaeology of the southern cone now includes the study of the expansion of capitalism, the processes of change, resistance and/or resilience in contact situations, ideology and power, gender and racism studies, the rural occupation of ranches and missions, and life in cities, among others. Current case studies illustrate the diversity involved in this knowledge area, exemplifying archaeology’s crucial role in the study of social processes close to the present.

[78] Symposium · NEW AND EMERGING PERSPECTIVES ON THE BAJO EL LABERINTO REGION OF THE MAYA LOWLANDS, PART 2

The Bajo el Laberinto region of the Maya lowlands was an important locus of cultural development, continuities, and transformations for over two millennia. Beginning around the time of the earliest sedentary communities and extending through to the Postclassic period, the Maya of this region established and developed communities along the margins of bajos (karst seasonal wetlands), transforming and managing complex and diverse landscapes to meet the demands of urban populations. During the Preclassic (900 BCE–200 CE), autonomous cities such as Yaxnohcah and Calakmul flourished in this sociospatial landscape. However, by 450 CE, Calakmul emerged as the center of a network of economically integrated urban settlements, ultimately becoming one of the largest cities in Mesoamerica and the most politically significant and influential Maya city from 650 to 850 CE. Interdisciplinary investigations in this region have generated robust data relevant to understanding the distribution of settlement, land use and water management strategies, and livelihood practices. More recently, new avenues of research have focused on continuities and disruptions in urban landscapes and social, political, and economic dynamics. This two-part symposium explores these themes, with contributors presenting findings and interpretations from new, ongoing, and recently completed work in the Bajo el Laberinto region.

[79] Symposium · SACRIFICIAL AND AUTOSACRIFICE INSTRUMENTS IN MESOAMERICA: SYMBOLISM AND TECHNOLOGY

In Mesoamerican cultures, blood was procured through sacrifice and autosacrifice with the intention of ensuring the acts of creation and feeding supernatural beings in exchange for their favors. The analysis of this deeply rooted phenomenon, widely spread throughout the region and across different time periods, has offered insight into several aspects of Indigenous cosmovision in Mesoamerica. Thanks to spectacular artistic representations by the Indigenous peoples, the ethnohistoric records left by European chroniclers, and the rigorous studies of the archaeological record, as well as ethnographic research in present-day Indigenous communities, fundamental evidence has been gathered to reconstruct the purposes, protagonists, spaces, techniques, and instruments involved in the practice of sacrifice and self-sacrifice. Despite the considerable

amount of existing literature on the subject, continued investigation of these rituals is critical to our understanding of these cultures. This session focuses on a meticulous exploration of some implements that facilitated blood extraction: maguey spines, bone awls, flint knives, and obsidian blades, among others. Archaeologists, historians, ethnohistorians, bioanthropologists, and cultural anthropologists will use various approaches and methodologies to discuss the function, symbolism, iconography, and technology of these implements.

[80] Symposium · LIFE AND DEATH IN MEDIEVAL CENTRAL EUROPE

The term “Central Europe” is a modern idea that has been adopted mainly out of convenience for historians. Most historians and archaeologists consider the region to include the modern-day nations of Poland, Czechia, Slovakia, and Hungary. To a lesser extent, the region also includes parts of Austria, Germany, and Romania. The general archaeological and historical records for Central Europe are overshadowed by the neighboring Western and Southern European regions. Part of this can be attributed to a long-term historical perspective during the twentieth century of the region being politically and economically “backward,” with an economy mainly centered around agriculture and extraction of raw materials. Despite these biases and the relative lack of data for the region during the Medieval period (eighth to fifteenth century), particularly regarding the lives of people in general, there remains sufficient information to suggest a high level of sociocultural complexity throughout the region. In this session we will combine studies across a wide spectrum of topics within bioarchaeology and mortuary archaeology, with a focus on providing representation of life and death in Medieval Central Europe, including mortuary patterns and concepts of death, mortality, health and nutrition, labor and physical activity, migration and mobility, and childhood.

[81] Symposium · AFTER THE FELINE CULT: SOCIAL DYNAMICS AND CULTURAL REINVENTION AFTER CHAVÍN

What happens in the north highlands of Peru after Chavín? The current record indicates major cultural transformations, which manifested in many regions and scales. The most prominent developments are associated with major population centers and complexes, yet there has been scant explicit comparison. The orthodox account involves the proliferation of large demographic centers associated with strategic hilltops at the expense of ceremonial centers. Parallel to this is the move away from priestly elites to more secular leaders, more typical of lineage and village heads (*kurakas*), often “chiefly” leaders who emerge to manage aspects of production (e.g., surplus, herding, warfare, irrigation). But is this right? To what extent do we see variability across the north highlands and adjacent regions? How good is the analogy to historical forms? This session explores post-Chavín “centers” and cultures, taking stock of changing patterns of exchange, stylistic interaction, and pathways to authority. Contributors explore, among other things, the kinds of social interactions encouraged through centers, and perhaps just as important, silenced by them; the ways centers embody, symbolize, and condition people; foci of social life and cosmopolitics in the rise of native leadership and corporate living; Chavín material legacies; and processes of sacralization and de-sacralization.

[82] Symposium · *SE THE STATE OF THEORY IN SOUTHEASTERN ARCHAEOLOGY

The US Southeast is known for its robust methodology and interpretation of sites (Paleo-Indigenous through the twentieth century) generated in part from the diversity of work conducted by the Works Progress Administration. Yet, it is less known for its creation of theory. Southeastern archaeology focused on applying concepts of culture history and modeling human behavior while adapting theories from other regions (e.g., processual, postprocessual, agency, political economy). This session examines the current state of theory in the Southeast across all time periods and includes economic, political, and social understandings of human culture grounded in methodology with applications cross-culturally. In addition, participants reflect on how the interpretation of archaeological data from the Southeast impacts contemporary social issues like climate change, social justice, and the production of knowledge. The goal of this session is to recognize the diversity of theoretical approaches being developed in the region and to examine the value Southeast archaeology brings to understanding how persons engage with social, environmental, and political change over time. Participants will engage with different time periods, subregions, and methodologies to demonstrate the contributions of the Southeast to archaeological and anthropological theory.

[83] Symposium · ADVENTURES IN BEEKEEPING: RECENT STUDIES IN ECOLOGY, ARCHAEOLOGY, HISTORY, AND ETHNOGRAPHY IN YUCATÁN

Beekeeping in Yucatán is a prime example of how the entangled ecologies among bees, humans, and plants were transformed over the last 2,500 years to create a shared heritage and vibrant array of communities of cultural practice. The stingless *Melipona* bees native to Mesoamerica supplied honey and wax to markets and consumers throughout the Mesoamerican world. After the Spanish invasion, the introduction of new plants, domesticates, and bee species from Europe, Africa, and Asia fomented new ecologies, social networks, commodity chains, and shifts in cultural practices. Beekeepers confronted a wide range of global technological and political-economic changes that shaped the historical contingencies of the last 500 years. The reproduction of traditional ecological knowledge, agroforestry, and environmental management needed to sustain beekeeping is currently at the forefront of grassroots conservation efforts to stop deforestation and the use of the herbicide glyphosate on the Yucatán peninsula. Participants offer new studies and insights about variation in multispecies ecologies, sustainability initiatives, iconography, the production, distribution, and consumption of honey, wax, and other bee products in the past and the present.

[84] Symposium · COLLABORATIVE ARCHAEOLOGY AT PICURIS PUEBLO: THE NEW HISTORY

At the onset of Spanish colonialism, Picuris Pueblo was one of the largest settlements in the Rio Grande Valley of New Mexico, serving as a key point of articulation in a regional economy that brought together the people and resources of the southern Plains, Rocky Mountains, and Pueblo region. After playing a leading role in the Pueblo Revolt of 1680, however, the resident population at Picuris declined precipitously, the combined effect of ongoing colonial violence, epidemics, and voluntary out-migration. Today, a resilient tribal community of roughly 300 enrolled members is seeking to extend traditional Indigenous knowledge of their ancestry using archaeological research. This session summarizes the findings of the first five years of the Picuris collaborative archaeology project, bringing together tribal members and outside researchers. Collectively, the research is transforming our understanding of the depth, scale, complexity, and regional connections of Ancestral Tiwa history in the northern Rio Grande region.

[85] Symposium · BREAKING THE MOLD: A CONSIDERATION OF THE IMPACTS AND LEGACIES OF RICHARD W. REDDING

Richard Redding's scholarship, leadership, and teaching has left profound and lasting impacts on generations of scholars. This session strives to honor his intellectual impact and scientific legacies, particularly on those studying human-animal interactions in the Near East, Europe, and Africa. Scholars working in diverse areas and periods owe a debt of gratitude to his intellectual curiosity and creativity. Papers in this session highlight the foundational contributions of Richard's work, the creativity with which he combined his background in biology and ecology with his intricate knowledge of archaeology, and his ability to link the archaeological record and modern-day pastoral strategies.

[86] Symposium · THE ELEMENTAL ANALYSIS FACILITY AT THE FIELD MUSEUM: CELEBRATING 20 YEARS SERVING THE ARCHAEOLOGICAL COMMUNITY

In 2004, the Field Museum (FM) established the Elemental Analysis Facility (EAF), dedicated to studying ancient materials to advance the research on trade and exchange of archaeologists working at this institution and to collaborate with scholars around the country and beyond. The EAF housed minimally destructive and completely non-destructive analytical techniques, including laser ablation–inductively coupled plasma–mass spectrometry (LA-ICP-MS) and portable X-ray fluorescence (XRF). These instruments are used to investigate FM objects and other artifacts that are part of research conducted by a variety of collaborating institutions. Several avenues of research have been developed over the years, including the circulation of obsidian in Mesoamerica and South America, the provenance of various stones of cultural importance, the exchange of ceramics in Peru, and the trade of glass beads in different parts of the world. During the life of the EAF, large databases have been built, offering comparative data that could be used to address complex questions related to ancient societies. The presentations in this session will present different projects conducted with the help of the EAF.

[87] Symposium · CULTIVATING FOOD, LAND, AND COMMUNITIES

Ancestral foods and landscapes are vital to the autonomy, identity, health, and well-being of Indigenous peoples, yet climate change is profoundly impacting their distribution and availability, and access to resources and knowledge about their nutrition, safety, and conservation is an immediate challenge. With a lineup of diverse voices, subjects, and perspectives, this symposium centers on the historical ecology and persistence of Indigenous food systems and landscapes. Studies push applied, temporal, and theoretical frontiers in the archaeology of food consumption, medicines, and human health and expand understanding of varied procurement and logistical strategies, processing and storage traditions, and environmental collective action in antiquity and modernity. We reflect on questions including, How might archaeological and historical data intersect with and speak to Tribal and local community needs and modern conservation issues? What are the challenges and potentials of research designed to support—directly or indirectly—programs focused on healthy communities and ecologies? By embracing multivocal, collaborative research and braiding Indigenous wisdom with Western science, we collectively aim to not only advance archaeological understandings but also contribute to the sustenance, resilience, decision-making autonomy, and well-being of Indigenous communities and their precious ecological heritage in the face of pressing conservation and climate change concerns.

[88] Symposium · COLLABORATIVE ARCHAEOLOGY: HOW NATIVE AMERICAN KNOWLEDGE ENHANCES OUR COLLECTIVE UNDERSTANDING OF THE PAST

Within the last several decades, Native communities in the United States have increasingly taken on the management of their own cultural resources, including the establishment of Tribal Historic Preservation Offices. Furthermore, federal agencies now require archaeologists to consult with Native Americans, and legislation has also altered how research institutions interact with tribal communities. These developments have increased connections among cultural resource managers and Native people, which in turn has led to greater incorporation of traditional knowledge into narratives regarding the past. At the same time, a dichotomy remains between prehistory and history, with some archaeologists still maintaining that certain prehistoric cultures such as the “Hohokam” no longer existed after prehistory. Not only are separate terms still applied to prehistoric and historic societies, largely different researchers investigate them, with archaeologists considering the former and historians the latter. Bridging the remaining gaps in our understanding requires continued integration of archaeological, historical, and traditional Native knowledge. This symposium presents recent contributions to this process, including research by a tribal cultural resource management department, as well as positive outcomes of the Native American consultation process.

[89] Symposium · STOREROOM TAPHONOMIES: SITE FORMATION IN THE ARCHAEOLOGICAL ARCHIVE

Traditionally, archaeology and bioarchaeology have been defined by excavation. Increasingly archaeologists are setting their “sites” on the storeroom and the archive. Engaging with collections, legacy data, accession forms, and excavation reports aligns with sustainability, open and slow science movements, and decolonial aims. Many also interrogate and respond to the colonial and imperialist histories of collections. Although collections-oriented studies are gaining visibility, few have fully engaged with the notion of curatorial institutions—museums, government repositories, nonprofit agencies, universities, private collections, and databases—as archaeological sites themselves. Yet, collections and archives are not neutral spaces. All have social and material histories shaped by entanglements with other objects, people, politics, events, and nonhuman actors. In turn, these histories shape the questions we ask and the conclusions we draw from them. The storeroom, archive, and database exhibit site formation processes—taphonomies—that also require excavation. Session papers investigate these “storeroom taphonomies.” What new questions or insights emerge when we turn our attention to the materialities of storage facilities and archives? We welcome discussions related to the various institutional settings where these processes occur and consideration of a range of artifacts and materials, such as, but not limited to, paper, bone, and organics alongside glass, metals, and ceramics.

[90] Symposium · THE ROLLOUT KEEPERS: PAPERS ON MAYA CERAMIC TEXTS, SCENES, AND STYLES IN HONOR OF JUSTIN AND BARBARA KERR

(SPONSORED BY DUMBARTON OAKS)

The work of Justin and Barbara Kerr has significantly advanced our understanding of ancient Maya ceramics. With his development of a special roll-out camera, Justin Kerr was able to create single photographs of the scenes decorating the surface of cylindrical vases. Using this technique, the Kerrs built a substantial image corpus of vessels from public and private collections and made these widely available to the scholarly community—first in print, with the “Maya Vase Book,” and later with the creation of the searchable online database Mayavase.com. In 2013, the Kerrs donated their photographic collection of over 60,000 images of Mesoamerican ceramics and artifacts to Dumbarton Oaks. As stewards of this material, we are working to provide new high-resolution scans and catalogue them according to the latest iconographic and epigraphic standards. Using images from the Kerr corpus as well as other comparative material, the papers in this session will examine how ceramic styles, iconographic themes, and hieroglyphic texts interrelate and what this may tell us about Classic period political, economic, or cultural developments. We hope that the Kerr Archive can continue to be a catalyst for cutting-edge research on text and image in Maya ceramic art.

[91] Symposium · NEW WORK IN MEDIEVAL ARCHAEOLOGY, PART 2: CROSSING BOUNDARIES, MATERIALITIES, AND IDENTITIES

In this second of two sessions presenting new work in medieval archaeology, papers focus on questions centered on identity, materiality, and interdisciplinarity, as well as new methods and theoretical frameworks being developed to investigate these issues from Late Antiquity to the late Middle Ages across Europe.

[92] General Session · TAKING A DEEP DIVE: NEW RESEARCH IN UNDERWATER ARCHAEOLOGY

[93] General Session · PALEOLITHIC SITES AND LITHIC TECHNOLOGIES

[94] General Session · ADVANCES IN ARCHAEOLOGICAL DATING AND CHRONOLOGY BUILDING II

[95] General Session · AFRICAN URBANISM AND HERITAGE

[96] General Session · REGIONAL AND COMPARATIVE ARCHAEOLOGY

[97] Forum · IN SEARCH OF SOLUTIONS: EXPLORING PATHWAYS TO REPATRIATION FOR NAGPRA PRACTITIONERS (PART V)

(SPONSORED BY CURATION INTEREST GROUP)

Now in its fourth decade, the Native American Graves Protection and Repatriation Act (NAGPRA) remains one of the most important legislative acts shaping the discipline of archaeology today. To adequately discuss the range of topics and provide examples and case studies incorporating shifting discourses of repatriation, policies, and collections management concerning Ancestors and objects subject to NAGPRA, the Committee on Museums, Collections, and Curation and the Curation Interest Group have arranged a five-part series. This forum seeks to engage in open dialogue on current but also ongoing issues with NAGPRA. These include the upcoming changes to NAGPRA regulations, Indigenous decision-making during NAGPRA implementation, NAGPRA policy implementation, practices beyond compliance, repatriation delays, Indigenous led curation care, among the other issues discussed in Parts I–III.

[98] Poster Session · ETHICS, EDUCATION, AND PUBLIC ARCHAEOLOGY PART II: THE WORLD AT LARGE

[99] Poster Session · ETHNOHISTORY AND ETHNOARCHAEOLOGY

[100] Poster Session · ETHICS, EDUCATION, AND PUBLIC ARCHAEOLOGY PART I: MUSEUMS AND THE CLASSROOM**[101] Poster Session · IMPROVING AND DECOLONIZING PRECONTACT LEGACY COLLECTIONS WITH FIELDWORK: MAKING SENSE OF HARVARD'S TURPIN SITE EXPEDITION (OHIO)**

In the formative years of professional archaeology in the United States, Harvard's Peabody Museum of Archaeology and Ethnology (PMAE) conducted many archaeology expeditions throughout the world, not least of which were those among Ohio's "mound builders." In Ohio, these were most often hasty and sloppy undertakings occurring in the wake of forced removals and land grabs in the Old Northwest Territory. The Turpin site is one such case where several acres were "excavated" over a few months in one winter season by four local laborers and a medical doctor under the direction of Frederic Ward Putnam, one of the first PMAE directors and "father" of American archaeology. Instead of only lamenting the dramatic loss and inadequacy of the PMAE collection, this session compares work I have led at the site over last several years that has focused on a systematic effort to remedy these shortcomings through additional fieldwork and one that seeks to be collaborative with tribal descendants and local communities.

[102] Poster Session · TRAINING A NEW GENERATION OF HERITAGE PROFESSIONALS IN THE VALLEY OF THE SUN: THE ASU FIELD SCHOOL AT S'EDAV VA'AKI

In spring 2023, Arizona State University held a new archaeological field school program, designed in collaboration with the City of Phoenix Archaeologist's Office, focused on a portion of S'edav Va'aki (formerly known as Pueblo Grande). The City of Phoenix archaeologist approached ASU in 2021 with a proposal to develop a field school that would help the city create a management plan for a parcel of land within the boundaries of S'edav Va'aki. This session presents the results of our collaboration, as well as critical assessments of the lessons learned from the process for both the university and the city, including challenges, successes, and ways that future such activities could be improved. These lessons are not only relevant to course participants but also archaeology instructors beyond ASU looking to develop more easily accessible field training opportunities and governmental employees hoping to establish partnerships with colleges and universities that can serve to train the next generation of heritage professionals.

[103] Poster Session · ARCHAEOLOGY OF THE VIRGIN BRANCH PUEBLOAN REGION

Inhabiting the far western edge of the Puebloan world, the Virgin Branch people have been subjected to far less research than those of most other Southwest archaeological cultures. Recent academic and contract projects in the region, however, are beginning to illuminate previously underexplored aspects of Virgin Branch lifeways. This poster session brings together archaeologists working in the Virgin Branch region to explore new findings from this culture area.

[104] Poster Session · *SE THE NEW NORMAL: APPROACHES TO STUDYING, DOCUMENTING, AND MITIGATING CLIMATE CHANGE IMPACTS TO ARCHAEOLOGICAL SITES

While public debate continues unabated regarding human-induced climate change, archaeologists have long since accepted this reality and have managed impacts to our collective cultural patrimony through a variety of research and mitigation strategies. In the past decade the numbers of students and scholars whose work focuses on climate change impacts to cultural resources has only increased; as the impacts of climate change become more prominent and intense, the need for additional scholarship and coordinated, collaborative action has become more apparent. Posters herein highlight the work of students and scholars who are leading a new wave of climate change research and pioneering novel approaches to studying and mitigating the effects of an intensifying climate on the material record of humanity.

[105] Poster Session · FULFILLING A NATION'S PROMISE: THE SEARCH, RECOVERY, AND ACCOUNTING EFFORTS OF DPAA AND ITS PARTNERS

The Defense POW/MIA Accounting Agency's (DPAA) mission is to provide the fullest possible accounting for missing personnel from past conflicts to their families and the nation. The search for these 80,000+

servicemen and servicewomen is an enormous task that requires innovation, adaptation, and teamwork. Since 2016, a growing number of universities, CRM companies, and other nongovernmental organizations around the world have joined the DPAA team in the ongoing search, recovery, and accounting effort. This poster symposium highlights the range of technological innovations, archaeological approaches, and expert collaborations DPAA and its partner organizations around the globe leverage during archaeological field work as they search for, attempt to recover, and account for missing US service members from World War II, the Vietnam War, and other conflicts. Applying these innovations, adaptations, and collaborations, DPAA is able to increase its capacity, sharpen its methods, and strengthen its relationships, all of which contribute to the ongoing success of the mission.

[106] Poster Session · LOOKING TO THE WEST: NEW INSIGHTS INTO POSTCLASSIC ARCHAEOLOGY IN MICHOACÁN

The Postclassic period in western Mexico is an exciting time. It is a time when both people and objects moved and transformed, forging very particular characteristics to the area, finally leading to the creation of the Tarascan empire. This poster session aims to present new ideas that have been developed in recent years on the archaeology of Michoacán during the Postclassic period, in terms of genetics, rock art, burial customs, and the presence of multiple archaeological objects.

[107] Poster Session · GLOBAL PERSPECTIVES ON HUMAN POPULATION DYNAMICS, INNOVATION, AND ECOSYSTEM CHANGE

A revolution in archaeological research now reveals that human populations often grew exponentially for long periods of time over the last 20,000 years, disrupted by periods of recession. This deep history of long-term population expansion and recession requires an explanation. In this symposium, we bring together scholars investigating feedbacks between human population, social and technological innovations, and ecosystems. The goals of the symposium are to explore what mechanisms drove exponential-like growth among many archaeological regions over thousands of years and to explain why some regions display more violent cycles of expansion and recession (sometimes called boom-busts) than other regions. To explore these questions, our posters bring together a collection of case studies, comparative studies, and formal models. The formal models will provide a foundation to critically evaluate the mechanistic relationships between innovation, constraints on innovation, and population dynamics across multiple types of ecosystems. The case studies and comparative studies will develop methods for integrating times-series of multiple types of data to document and test for causal relationships between population, social and technological innovation, and ecosystem change.

[108] Poster Session · RECENT ARCHAEOLOGICAL WORK BY CHRONICLE HERITAGE

Cultural resource management is the primary employer of archaeologists in the United States and has seen an increase in the number and scale of projects conducted in the past several years. This poster session presents examples of recent work by Chronicle Heritage staff in Arizona, New Mexico, Oregon, California, and Florida, including survey, excavation, artifact analyses, ethnography, and broader considerations of ethical issues in archaeology. These posters demonstrate the scope of work being conducted by CRM archaeologists and its research potential.

[109] Symposium · AND THEY LOOK INTO THE MIRROR FOR ANSWERS: MIRROR ANALYSIS TO UNDERSTAND ITS HOLDER

No matter what material they were made of, stone, metal, or crystal, or if it was cheap or expensive (gold, silver, copper, bronze, obsidian, or pyrite), mirrors are one of the most fascinating artifacts made by artisans in the past. The users of these items were normally high-class members of society (political figures, high military members, merchants, holy men, or priests), and due to their complex manufacture, they were not easy or cheap to get their hands on them. Mirrors were considered a high-status item and used as a commodity for commercial, ceremonial, and even political performances. Mirror studies have gained a lot of attention lately in order to understand how they were made, who used them, how they used them, and/or what they mean for holders. In this symposium, we will present the results of those analyses.

[110] Symposium · HYDRO-ECOLOGICAL SYSTEM OF THE MAYA IN PETÉN, GUATEMALA

Because water is necessary for human life and for agriculture, water management was critical for the survival of past societies and is a significant issue for the archaeology of climate change and sustainability. How were water sources controlled/not controlled? How did people utilize and maintain water sources? How was water involved in ecological, ideological, and symbolic systems? How was water related to ecological, ideological, and symbolic systems? In the Petén lakes region, Guatemala, freshwater ecosystems served as nurseries for many animals and fishes for the Maya around the region. In this session, we consider water management strategies and techniques in archaeological sites in Petén. Session participants discuss a wide range of water management practices, including water uses of lacustrine resources. By understanding the ways in which the Maya communities managed their water in the region, we might be able to solve present-day problems.

[111] Symposium · EMERGING VOICES IN MOGOLLON ARCHAEOLOGY

The Mogollon subregion of the US Southwest / Mexican Northwest is situated in Southwest archaeological history as the least understood of the “Big Three” regional cultural traditions that were established while culture history was the dominant paradigm in American archaeology. This is partially credited to the Mogollon exhibiting less grandeur than its sister region to the north (Ancestral Puebloan) and less cultural resource management work conducted there compared to its sister region in the west (Hohokam), resulting in the Mogollon being further situated from the public and archaeological eye. The Mogollon region is arguably one of the most diverse of the three subregions, spanning from the southern edge of the Colorado Plateau to north-central Mexico, encompassing a broad range of environments and site types. Further research into the Mogollon across time would contribute to a better overall understanding of Southwest archaeology. This session seeks to expand on well-established scholarship in the Mogollon area by adding work from rising scholars using diverse methodologies to that of the established (and changing) narratives of the region. We hope that this symposium will encourage the further renewal of research and collaboration within the Mogollon area.

[112] General Session · ROCK ART STUDIES**[113] General Session · THE MEDITERRANEAN DIETS****[114] General Session · MATERIALS ANALYSIS IN MESOAMERICA****[115] Symposium · ARCHAEOLOGIES OF MOTHERHOOD**

Since Conkey and Spector’s groundbreaking work on feminist archaeology, the field has significantly expanded its scope to encompass gender archaeology, queer archaeology, and archaeology of children, women, and indigeneity. While archaeology of motherhood has been discussed and examined, it has largely remained “in the shadow” of other significant topics. This session aims to understand how mothers have healed the maternal body; what practical (magical) solutions did they use to prevent pregnancies, have safe deliveries, and induce lactation? This session presents papers from various disciplines that will examine topics that vary from wet nurses in Ancient Egypt to grandmothers in Ancient Greece; while also presenting the material culture of mothers and infants from the Eastern Mediterranean to Roman Britain. Two other papers will study devotional therapeutics for (in)fertility and motherhood in Austria, in addition to maternal marginalization and infant mortality in New Zealand.

[116] General Session · NEW RESEARCH ON THE NEOLITHIC**[117] General Session · EARLY ANDEAN SOCIETIES****[118] Symposium · MATERIALS IN MOVEMENT IN THE ISTHMO-COLOMBIAN AREA**

Archaeological research in Central America has traditionally focused on the material culture of its precolonial inhabitants. While objects have long been used to infer cultural identities, filiation, and migration patterns

from cultural-historical approaches, the last decades have seen more nuanced practices. Discussions around authenticity have redirected attention to integration processes within local traditions, further benefiting the interpretation of foreign versus local. Moreover, new foci on materiality beyond artifacts have contributed to new understandings of mobility. In providing a regional overview of recent research on trajectories and biographies of circulating materials and their role in local lifeways across the Isthmo-Colombian Area, this symposium seeks to explore the material culture, exchange mechanisms, and cultural interconnections within the region. Contributions will provide insights into the movement of artifacts, (raw) materials, and resources within and across the Central Americas. In doing so, we aim to further understand the local reception, integration, or exclusion of foreign materials.

[119] Symposium · ARCHAEOPHYCOLOGY: NEW (ETHNO)ARCHAEOLOGICAL APPROACHES TO UNDERSTAND THE CONTRIBUTION OF SEAWEED TO THE SUBSISTENCE AND SOCIAL LIFE OF COASTAL POPULATIONS

Seaweeds have been occasionally documented in archaeological sites with outstanding preservation conditions, and though they have received minor attention from an archaeological perspective, coastal archaeology is heightening interest in these resources as a significant portion of the archaeological record of coastal areas that might be systematically dismissed. To the scarce historical information and their poor preservation, we might add theoretical and ideological aspects that result in the invisibilization of these resources (such as their current use by Indigenous societies). Furthermore, many coastal environments (such as the Arctic or coastal deserts) exhibit poor terrestrial plant production, which may result in an increased consumption of seaweeds, a unique, valuable, ubiquitous, and low-risk resource. Seaweed foraging practices constitute the expression of the continuity of a gathering way of life deeply rooted in coastal environments, thus traditional ecological knowledge related to seaweeds is essential for evaluating harvesting methods and their potential uses today. This symposium aims to provide an overview of the current state of a field focused on seaweeds, including several approaches ranging from contributions concerning all the different methodologies that can be used to detect seaweeds in the archaeological record or experimental archaeology to cross-cultural ethnographic approaches.

[120] Symposium · THE ARCHAEOLOGY OF THE SOUTHERN YUKON-ALASKA BORDERLANDS

This session will discuss the archaeology of the southern Yukon-Alaska borderlands (SY-AB), defined as the region north and south of the Alaska Highway and east and west of the international border for about 100 km. It encompasses the highway corridor from the north end of Kluane Lake, Yukon, to the Tanacross, Alaska, regions, with the Wellesley Basin/Yukon-Tanana uplands to the north and the St. Elias–Wrangell Mountain range to the south. Sites such as Little John in Yukon and Linda's Point and Nateł Na' in Alaska date human occupations of the region to the Beringian Allerød (ca. 14 to 13 Kya). It is the area of origin for native copper and the crossroads of contact of the four major obsidian sources—Wiki Peak, Batza Tena, Hoodoo Mountain, and Edziza—for northwest America. The SY-AB also contains a continuous history of Holocene occupations and a rich record of Late Prehistoric and Postcontact Amerindian-European interaction. This symposium will highlight specific sites and topics of research in the SY-AB and cumulatively argue for increased attention to an often overlooked but fecund area for future archaeological research in eastern-most Beringia.

[121] Symposium · GEOLOGICAL AND TECHNOLOGICAL CONTRIBUTIONS TO THE INTERPRETATION OF RADIOGENIC ISOTOPE DATA

Radiogenic isotopic systems (e.g., Sr, Nd, Os, Pb) have become widely applied for inferring the geological sources of archaeological materials and for reconstructing technologies integral to their production. Large databases of geological materials (including GlobaLID, IberLID, and Killick et al. [2020]) are now contributing to the growth of these analyses and helping increase access to necessary data for their interpretation. Despite this rise in the use of these techniques and the resources available to these studies, the interpretation of isotopic ratios in archaeological materials is often attempted without a clear understanding of how geological processes produce natural variation or how technological processes (smelting, alloying, recycling, mixing, etc.) can alter isotopic ratios of natural materials. Therefore, we invite papers that address

these issues and incorporate geological and/or technological foci for the interpretation of radiogenic isotopic data in archaeological materials.

[122] Symposium · HOLTUN: INVESTIGATIONS AT A PRECLASSIC MAYA CENTER

This session will detail investigations by the Holtun Archaeological Project (HAP) over the course of almost 10 years of archaeological research in the Maya Lowlands of Guatemala. Our primary focus has been the development of social inequality during the Preclassic period, but we have also investigated other topics such as human resiliency, heterarchy, and power dynamics in the Preclassic and beyond. Papers will cover the history of research at the site in general and focus on recent materials analysis such as fauna, obsidian, and ceramics, as well as methods like geochemical analysis of soils and isotope analysis of human bone. We will also touch on elements of social organization and political and economic control in terms of water management, trade and redistribution, craft production, and commensalism. In addition, we will review conservation recommendations and avenues for future research.

[123] Symposium · THE ARCH STREET PROJECT: MULTIDISCIPLINARY RESEARCH OF A PHILADELPHIA CEMETERY

In 2016 human remains were discovered in Philadelphia at 218 Arch Street during a private construction project. The site was formerly the First Baptist Church of Philadelphia's cemetery and, according to historical documents, the cemetery was relocated in 1860. The ensuing excavation in three phases during 2017 recovered nearly 500 burials. Research efforts surrounding the excavation and analysis of the remains created a multidisciplinary collaborative of academics and professionals dubbed the "Arch Street Project." The court in Philadelphia granted permission for the Arch Street remains to be analyzed until September 2023. On September 1, all human remains, material culture, and associated samples were reburied at Mt. Moriah cemetery, the relocation destination from 1860. This session presents several of the research projects stemming from the Arch Street material. The synthesis of these projects into a final interpretation offers a fuller and broader picture of this unique site and provides an unprecedented glimpse into the city's community from the colonial period to the early republic.

[124] Symposium · POLITICS OF HERITAGE VALUES: HOW ARCHAEOLOGISTS DEAL WITH PLACE, SOCIAL MEMORIES, IDENTITIES, AND SOCIOECONOMICS

(SPONSORED BY HERITAGE VALUES INTEREST GROUP)

The last decades have moved the concept of "heritage" to the forefront of cultural resources management, historic preservation legislation, the tourism industry, academic institutions, and nonprofits. Since the official definition by UNESCO in 1972, heritage discussions have become increasingly fluid and contested. In the Americas, archaeologists engage with descendant communities over questions of ownership and rights to certain places and excavated materials. The core challenge in these conflicts is that in Indigenous knowledge systems, sense of place, boundaries, law, and history do not align with the Western system. Social memory may lay claim to places and cultural objects contradicting Western constructions of borders and histories. The concept of heritage raises related questions when we look at countries in Europe and the Middle East, where modern people live in and around archaeological sites and have strong feelings about place and history. This panel asks how can heritage discourse be made meaningful and productive in the social sciences in the twenty-first century? How could heritage objectives empower archaeology and grow knowledge by decolonizing? And how can fruitful and trusting partnerships form between archaeologists and Indigenous people? Archaeology-based case studies from different parts of the world are welcome.

[125] Symposium · AGUADA FÉNIX AND THE MIDDLE USUMACINTA REGION: INTERREGIONAL INTERACTIONS AND SOCIAL TRANSFORMATIONS IN THE MIDDLE PRECLASSIC PERIOD

Data recovered in Aguada Fénix and the Middle Usumacinta Region has significantly contributed to understanding Mesoamerica's early history, particularly early Maya societies. Since 2017, research by the Middle Usumacinta Archaeological Project (MUAP) has focused on understanding the interregional interactions of groups inhabiting the Isthmian Interaction Sphere that led to the development of early Maya societies, as well as the ways in which these groups adapted to the environment. Ongoing investigations

address inquiries related to monumentality as a collective effort, social and symbolic practices, sedentarism and semi-mobile ways of life, intensification of maize agriculture and mixed subsistence, and modification of the landscape. In this session, we will present research advances by MUAP and their implications for the study of Middle Preclassic Mesoamerica.

[126] Symposium · EXPEDIENT TECHNOLOGICAL BEHAVIOR: GLOBAL PERSPECTIVES AND FUTURE DIRECTIONS

Stone tools and technological behavior can be considered to lie along a continuum from curation to expediency. While the topic of tool curation has received substantial attention since introduced by Binford, the significance and interpretive potential of expedient technologies—often alternatively described as low-cost, informal, simple, or opportunistic technologies—have enjoyed less explicit discussion. Even so, expediency can be said to characterize an important portion—indeed, perhaps even most—of hominin technological behavior since the Oldowan. Expediency here refers to employing low-cost solutions to technological problems and it may characterize any stage of tool-related behaviors, from raw material procurement to tool manufacture, use, and discard. This session aims to bring together perspectives on expedient lithic technological behavior from a variety of chronological and geographic contexts to reach broader reflections on the theoretical and practical place of expediency in the archaeological interpretation of stone tool technological variability. Within this framework, certain underlying questions are proposed: How is expediency best defined? What sorts of questions can the study of technological expediency answer? What analytical tools should be used to study expedient technology? Does expediency largely “look the same” across contexts, or does expediency have different, culturally grounded manifestations?

[127] Symposium · COLORING OUTSIDE THE LINES: RE-SITUATING UNDERSTANDINGS OF THE LIFEWAYS OF EARLIEST PEOPLES OF THE CIRCUM-CARIBBEAN

A century of research on the early inhabitants (previously called “Archaic” peoples) of the Caribbean has, too often, been restricted by boundaries and labels, be they geopolitical borders or the temporal and cultural categories assigned by colonial historical sources or early archaeologists. Recent decades have seen many relevant advances, both methodological and theoretical, in the reconstruction and conceptions of these early lifeways, and yet conversations and discussions that cross these lines/boundaries are too few (with the exception of work like Hofman and Antczak 2019), thereby reifying the labels and forestalling the development of more refined understandings of this early period, its people, their ways of being, sociocultural interactions, and transcendence to other spaces and moments of the precolonial Caribbean. This symposium features the research of scholars working across the insular and mainland Caribbean and intends to scale-up discussions about recent findings and theoretical and methodological perspectives concerning the first Caribbean population from local or regional research to the entirety of the circum-Caribbean area. The objective is to build new understandings of the diversity and commonalities of the early Caribbean populations from a multiscale perspective and create research synergies that cross the diverse boundaries that have limited their better comprehension.

[128] Symposium · BEYOND MAIZE AND CACAO: REFLECTIONS ON VISUAL AND TEXTUAL REPRESENTATION AND ARCHAEOLOGICAL EVIDENCE OF OTHER PLANTS IN PRECOLUMBIAN MESOAMERICA

Discussions of plant use in Mesoamerica have historically focused on two agricultural resources: maize and cacao. While recognizing the importance of these resources, we call attention to the critical contributions of other foraged and horticultural plants to nourishing the bodies and souls of indigenous Mesoamericans. Agroforestry systems in Mesoamerica were multilayered, species-rich, and adaptive. This session asks how less studied plants contributed to these anthropogenic landscapes (perhaps even as keystone species), what economic roles they played, and how such plants also factored, on a more ideological level, into visual and textual communication systems. Each participant takes up the task of considering visual, textual, and/or archaeological evidence of a species or category of food/nonfood plants (other than maize or cacao). Papers will expand our understanding of how a diverse suite of wild and domesticated resources contributed to sustaining human life and relationships with non-human agents. By placing various time periods, subregions,

and methodological frameworks in discussion with one another, this symposium will bridge the gap between humanistic and scientific discussions of less discussed but nevertheless invaluable plant resources.

[129] Symposium · GENDER IN ARCHAEOLOGY OVER THE LAST 30+ YEARS

(SPONSORED BY WOMEN IN ARCHAEOLOGY INTEREST GROUP AND COMMITTEE FOR THE STATUS OF WOMEN IN ARCHAEOLOGY)

How far have gendered studies in archaeology come since the 1990s, when the Women in Archaeology Interest Group (WAIG) was formed? At the time, women constituted a minority of the gender ratio, while today there is near parity between these binaries. Additionally, there was no formal representation by gender non-binary/non-conforming/queer archaeologists at the SAA until 2014. How has the field changed with better representation? How have we expanded, deepened, and enhanced our understandings of gender, broadly writ? In this session, participants will grapple with the concept of gender, as can be understood from archaeological data and theory but also experientially from within the discipline. Discussion will center on the articulation of modern conceptions and past interpretations of gender and will reflect on how gender scholarship—and the gender of scholars—has changed in the last 30+ years.

[130] Symposium · THE ARCHAEOLOGY OF WETLANDS

Covering just over 6% of the Earth's surface, wetlands contain more than 40% of the Earth's biodiversity. Because of this, wetlands—the transitional feature between terrestrial and aquatic ecologies—are considered one of the most important ecosystems on the planet. However, due to climate change and human-environmental modifications, wetlands are disappearing. About 50% of the world's wetlands have already been destroyed, presenting an enormous ecological catastrophe. By showcasing archaeological examples of human-wetland interaction through time and around the world, this session combats the stereotype of wetlands as uninhabitable and unutilized places in the human past. The papers presented here will investigate the ways in which wetlands—from fresh to salty, and from low- to high-altitudes—have been exploited. With these investigations, we stress the need for the protection of, and in some cases, the restoration of these critical ecosystems.

[131] Symposium · *SE NEW ORLEANS AND ITS ENVIRONS: HISTORICAL ARCHAEOLOGY AND ENVIRONMENTAL PRECARIETY

Since New Orleans celebrated its tricentennial in 2018, archaeological research has continued in and around the city at a rapid pace, much of it triggered by federal involvement in construction and infrastructure projects. This session brings together a diverse collection of recent work on historical archaeology in southeastern Louisiana, where environmental precarity and a shared history of extractive economies, from the plantation to the petrochemical, links urban and rural landscapes.

[132] Symposium · THE ARCHAEOLOGY OF FAILURE

Failure is a fundamental part of the human condition yet remains undertheorized in archaeology. Failure is admittedly definitionally tricky and can operate at multiple scales, from the catastrophic downfalls of ancient societies to everyday blunders and mishaps. Yet the challenges make it all the more interesting. In this session, we bring together papers and researchers working on material from various periods in the New and Old Worlds, mixing case studies and theory. We examine what it means to fail, what failure looks like in the archaeological record, and what happens when we fail to fully appreciate failure.

[133] General Session · ARCHAEOLOGY OF THE PACIFIC NORTHWEST AND PLATEAU

[134] Symposium · WEAVING EPISTEMES: COMMUNITY-BASED RESEARCH IN LATIN AMERICA

Research in Latin America has constantly rethought its approach toward communities. Even though the transformations vary in each country and region, only epistemological dialogue on an equal footing will allow each country to revisit data, rethink practices, and better understand the relationships between materiality (space/nature) and human interactions. This epistemological dialogue can synchronize different cognitive regimes from the rich cultural diversity of the Americas, making it possible to understand power relations,

ways of life, political hierarchies, practices, and social interactions among people in different contexts. This symposium aims to promote a conversation about the possibilities of establishing equivalent dialogues between academia and communities, especially among Latin American women.

[135] General Session · CARIBBEAN ARCHAEOLOGY

[136] General Session · INDIGENOUS AND COMMUNITY-BASED ARCHAEOLOGIES IN NORTH AMERICA I

[137] General Session · MANAGING ARCHAEOLOGICAL DATA AND COLLECTIONS

[138] Symposium · ADVANCES IN PERISHABLE WEAPONRY STUDIES: DEVELOPING PERSPECTIVES FROM DATED CONTEXTS TO EXPERIMENTAL ANALYSES

This symposium includes insights from researchers dating and analyzing extant perishable weapons systems and those replicating and experimenting with these organic materials. Because weapons are the primary tools by which human groups obtain animal protein and resolve (or exacerbate) conflicts over territory and resources, a holistic study of these systems (including experiential, replicative, and ballistic dimensions) is critical for forming an accurate view of past land-use patterns and economic systems. By bringing together a range of papers spanning dated and sourced weaponry to actualistic studies, this symposium aims to provide a more cohesive understanding of the emergence and applied use of weapons.

[139] Symposium · WATER IN THE DESERT: HUMAN RESILIENCE IN THE AZRAQ BASIN AND EASTERN DESERT OF JORDAN

For thousands of years, plants and animals including humans moved back and forth along the Levantine corridor—a geographic region that connects Africa to Eurasia. At the margin of this corridor lies the Azraq Basin in the Eastern Desert of Jordan, which previously had extensive spring-fed wetlands at its center. These wetlands remained intact until the early 1990s when the combination of climate change and years of water overdraw led to desiccation of the springs. This session explores human resilience in the face of climate change and documents the shifting relationships between people, plants, animals, and objects in this challenging ecosystem from the Lower Paleolithic to historic times.

[140] General Session · SUBSISTENCE AND FOODWAYS IN THE US SOUTHEAST

[141] General Session · PUBLIC AND COMMUNITY ARCHAEOLOGY IN EUROPE AND BEYOND

[142] Forum · AMERICAN URBAN ARCHAEOLOGY IN THE TWENTY-FIRST CENTURY: REFLECTIONS AND FUTURE DIRECTIONS

The archaeology of urban places has a long disciplinary history, though the tradition of urban archaeology in the United States was largely spurred by the introduction of cultural heritage legislation, broader historic preservation movements, and so-called urban renewal projects mid-twentieth century. Since then, individual cities have developed long traditions and literatures (see Rothschild and Wall 2014). In the 1980s and 1990s, a collaborative group of urban archaeologists in the United States met regularly to discuss ideas and issues unique to excavation and research in urban spaces. This panel is intended to be a reflection upon the challenges, goals, and themes of and in urban archaeology throughout the Americas and beyond as it stands in 2024 with the intent of developing an Urban Archaeology Working Group in the spirit of this previous collective. This revived group would be geared toward collaborating on issues—both in theory and praxis—faced in cities today. Researchers invested in these questions are encouraged to attend for open discussion among panelists and audience members.

[143] Forum · BONES IN THE IVORY TOWER: CONSIDERING THE ETHICS OF TEACHING WITH HUMAN OSTEOLOGICAL COLLECTIONS

As conversations have proliferated around the ethics of working with human remains (including the SAA's Statement Concerning the Treatment of Human Remains, 2021), much of the focus has been on research and curation within museum settings. Significant work remains to consider if, or how, human osteological collections can ethically be used for teaching and training in universities. Often these collections of human remains have been acquired and curated over multiple generations of researchers; they are poorly provenanced, fragmentary, and incomplete. In the United States, these collections have largely exploited the remains of Indigenous Ancestors and impoverished and/or minoritized communities. NAGPRA forced universities to review their human osteological collections and current events have renewed scrutiny about who is acquired and used in osteological teaching collections. This forum aims to contribute to conversations on teaching with and about human remains in anthropology departments. Topics will include curation, documentation, access, repatriation, and pedagogical approaches. Discussants will offer case studies of the ethical considerations facing teachers, researchers, and other practitioners in our field. Together, we will discuss the work that we must do to contextualize the persons within our care, train the next generation of archaeologists, and reaffirm our commitment as ethical stewards.

[144] Forum · CONTEXTUALIZING SITE EVALUATIONS WITHIN THE CULTURAL LANDSCAPE

While Section 106 consultation focuses largely on the significance and eligibility of individual sites, we must recognize that sites are not necessarily discrete units but are part of a broader cultural landscape. To what extent then, can and should we be examining this relationship within the confines of archaeological survey and Section 106? We will focus on sites with ancestral affiliation and presumptively ask, what do Indigenous people want to know? What approach can be taken when we can assume that different descendant communities will have different associations with the landscape? This is an exploratory forum to discuss potential agency and tribal responsibilities, methods of inquiry and documentation, and the applicability of cultural landscape identification in the Section 106 process. Lastly, what are the long-term management implications of these places once they are identified?

[145] General Session · INTERDISCIPLINARY RESEARCH ON SUBSISTENCE AND FOODWAYS**[146] Lightning Round · HOW DO WE KNOW WHAT WE KNOW? IN HONOR OF TERENCE D'ALTROY**

Terence D'Altroy has had a profound impact on the archaeology study of the ancient societies of the Andes and beyond. His work in the 1980s established the important theoretical concepts of staple finance and wealth finance in the discipline, while his publications in the 1990s on provincial manifestations of imperialism changed the way Inka politics was understood. In the twenty-first century, he has continued to break new ground in his research on imperial social epistemologies. Despite his shifting thematic interests over the decades, D'Altroy has always insisted on a having a rigorous basis for connecting field or laboratory observations to theoretical abstractions. This session will be a forum in which various archaeologists who have been influenced by D'Altroy's work will have an opportunity to discuss its ongoing value and significance for research in the Andes and elsewhere.

[147] Symposium · ARCHAEOLOGY TO TRANSFORM AND DISRUPT: TEACHING, LEARNING, AND THE PEDAGOGIES OF THE FUTURE

In 2007 Burke and Smith published "Archaeology to Delight and Instruct: Active Learning in the University Classroom," a groundbreaking book on teaching and learning archaeology through creative, inclusive, and novel teaching activities for students of archaeology in higher education. In this session, we celebrate the legacies of this book and invite papers that think about teaching and learning in archaeology and heritage today, encouraging participants to reflect on how teaching and learning can and does challenge the status quo. We are particularly interested in new innovations in teaching and learning, particularly where they challenge inequalities, support climate resilience, and break down boundaries. We invite papers from all career stages,

including the experiences of students. This will be a nonjudgmental and safe space to discuss challenges, successes, and the future of teaching and learning in archaeology and heritage in universities and beyond. Papers are invited from across the globe, and we welcome discussions of teaching in any setting, from classrooms to more practical spaces such as the field and labs.

[148] Symposium · AT THE FRONTIER OF BIG CLIMATE, DISASTER CAPITALISM, AND ENDANGERED CULTURAL HERITAGE IN BARBUDA, LESSER ANTILLES

Small Island Developing States (SIDS) of the Caribbean are vulnerable to the effects of climatic change. The damaging impacts of contemporary sea-level rise and increasing hurricane activity have had a significant influence on the region's physical, economic, and sociocultural landscapes. In 2017, Category 5 Hurricane Irma made a direct hit on the island of Barbuda, of the nation Antigua & Barbuda, which resulted in the evacuation of the island's entire population and widespread devastation. This symposium focuses on the first year of an NSF IRES international research effort to study current issues in Caribbean archaeology, historical anthropology, geoarchaeology, bioarchaeology, osteobiography, photogrammetry, site management, geobotany, and community cultural heritage. Collaborators in this project explore the long durée in a transdisciplinary perspective from the first peopling to the present day. The peer mentorship of junior colleagues is at the core of this endeavor, so as they move into their chosen fields, they are better prepared to address the unprecedented effects of the Anthropocene in a holistic perspective.

[149] Symposium · ENDURING RELATIONSHIPS: PEOPLE, PLANTS, AND THE CONTRIBUTIONS OF KAREN R. ADAMS

This symposium honors the outstanding research and mentorship contributions of Dr. Karen R. Adams in archaeology, paleoethnobotany, and the plant sciences. Dr. Adams's broad research contributions include significant work on archaeobotanical sample collection and analysis techniques, interdisciplinary work on Indigenous maize landraces, and influential work on the cultivation, domestication, and movement of plants native to the US Southwest and Northwest Mexico. For nearly five decades, she has been at the forefront of analyzing and interpreting diverse archaeological plant remains, the results of which are reported in nearly 150 peer-reviewed publications and hundreds of technical reports. Beyond this, Dr. Adams has also excelled as a mentor to young scholars, particularly in her role guiding and training three decades of environmental interns in paleoethnobotanical methods and interpretation at the Crow Canyon Archaeological Center in southwestern Colorado. In this session, colleagues and former students present research and applied work inspired by and celebrating Dr. Adams's unparalleled career.

[150] Symposium · COLLABORATIVE AND COMMUNITY ARCHAEOLOGY

Collaborative and Community Engaged Scholarship (CES) is an important topic in our profession, encompassing a growing diversity of activities. We continue nine years discussing issues and best CES practices in archaeology. This session displays a commitment to conducting research and historic preservation in effective partnership with multiple stakeholders as a matter of fairness, ethics, and as a way to create and co-create robust and useful final products. Archaeological projects affect Indigenous peoples, local residents, and descendant communities in many ways. These groups often have relatively little input into what "others" say about, or do with, their heritage. We advance inclusive, community-engaged scholarship that is co-created with relevant communities. The goal of this session and many of the projects discussed is to use community involvement and participation as a way not only to give a voice to groups that have been essentially voiceless, but to empower all stakeholders—especially on projects that involve "multiple pasts." We discuss trajectories of developing relationships and projects that can become respectful, useful, and productive CES.

[151] Symposium · EXPLORING LONG-TERM PASTORAL DYNAMICS: METHODS, THEORIES, STORIES

This session aims to delve into the multifaceted realm of long-term pastoral dynamics, employing the perspectives of archaeology and ethnoarchaeology to unravel the methods, theories, and stories that shed light on the intricacies of pastoralist lifeways. The objective is to deepen our understanding of the longevity and sustainability of pastoral practices, emphasizing the complex interactions between humans, animals, and

the environment over extended periods. Specifically, this session has been organized to examine the social and cultural transformations within pastoral societies over time in different regions of the world where pastoralism continues today in order to try and understand the resilience and flexibility of these communities in response to environmental, social, political, and economic changes. We hope that this exploration will shed light on the strategies employed by pastoralists to adapt and thrive. We also hope that by drawing on the lessons learned from long-term pastoral dynamics, we can identify time-tested and innovative practices to ensure the sustainability of pastoralist lifeways.

[152] Symposium · WHAT HAPPENED AFTER THE FALL OF TEOTIHUACAN?

The great metropolis of Teotihuacan in Central Mexico was a unique settlement in Classic Mesoamerica due to its huge size, orthogonal urban grid, and multiethnic society. The contradiction between the corporate base or the ruling council and the competitive behavior of the intermediate elite tore the multiethnic pact and provoked a revolt that set the core of the city on fire, the settings associated with the ruling elite. This event was contemporary with the heavy impact of urban sprawl in its immediate environment as well as a long-lasting drought in Central Mexico. The effects of the fall of Teotihuacan impacted all Mesoamerica. Most of the population fled from the city and was replaced by newcomers. This symposium will review the information we have on the Epiclassic and Postclassic groups that lived in the valley of Teotihuacan after the collapse of the Classic metropolis. The project I headed since 1987, "The Study of Tunnels and Caves in Teotihuacan," offered a vast amount of information on subsistence; manufacture of objects; and funerary, fertility, and deity rituals of the Coyotlatelco people with links to the Bajío region, the Mazapa groups with relations to the Tula Valley, and the Aztecs.

[153] Symposium · RECENT COLONIAL ARCHAEOLOGICAL RESEARCH IN THE AMERICAN MIDCONTINENT

The colonial era has attracted considerable archaeological interest in the American Midcontinent over the past few decades. Recent research aims to examine how that record is interpreted and the role it plays in contemporary social science inquiry. Before and during the early years of nationhood, French, French-Canadian, British, Native American, African/African American, and the Métis/métis peoples struggled to create and maintain their identities in a rapidly changing social, political, and economic world. The papers in this session explore the daily lives of these shifting colonial populations through archaeological study of gender, materiality, power, survivance, ontology, and landscape.

[154] Symposium · WHAT'S CANOE? RECENT RESEARCH ON DUGOUTS

Climate change and associated shifts in the modern use of landforms and waterways has led to a number of recent discoveries of dugout canoes. Approaches to the study of these objects draw on historical, ethnohistorical, material, and archaeological sources of evidence and include writing the biographies of individual canoes; regional multivariate analyses of dugouts; efforts to model water transportation along canals, rivers, and lakes; Indigenous and non-Indigenous experimental efforts to craft and use dugouts; innovative methods to search for dugouts mired in lake bottoms; and more. Papers in this session offer an overview of current investigations of dugout canoes.

[155] Symposium · THEORIZING PREHISTORIC LARGE LOW-DENSITY SETTLEMENTS BEYOND URBANISM AND OTHER CONVENTIONAL CLASSIFICATORY CONVENTIONS

Archaeologists are increasingly unveiling evidence that defies conventional classificatory models whereby the development of sociopolitical complexity was a unilinear, stepwise, and standardized process. The prehistoric large low-density settlements are among such evidence and are enabling scholars to acknowledge the organizational plurality and diversity intrinsic to the human past. After decades of being neglected analytically and comparatively, at best considered anomalous cases of ancient urbanism, these settlements are becoming a prolific field for archaeological discussions about the challenges of large population aggregation. Recently documented cases strongly suggest that they can appear without following the incremental increase in complexity that previous anthropological models predicted. In the absence of this prescriptive prelude, archaeologists have started recognizing various developmental trajectories not even considered possible in the past. This session aims to contribute to these discussions by analyzing and comparing worldwide low-

density settlements, allowing us to theorize the social, cultural, economic, and political processes underpinning them. By foregrounding the issues above, we avoid imposing long-lasting classificatory conventions that tend to assume monolithic governance apparatuses, integration mechanisms, ideological systems, and subsistence regimes. The session adds to the scholarship on low-density settlement patterns by providing new datasets and avoids the yardstick problem by critically analyzing these data.

[156] Symposium · PAINTING THE PAST: INTERPRETIVE APPROACHES IN GLOBAL ROCK ART RESEARCH

Rock art research transitioned beyond descriptive–typological studies four decades ago, initially using ethnographic analyses followed by the addition of neuropsychological models and subsequently with a wide variety of approaches, the circumstance today. Current interpretive studies range from traditional but intensive iconographic research through quantitative analyses to landscape studies to collaborations with Indigenous peoples. Concern with the metaphysical beliefs—epistemology and ontology—of the creators of rock art underlies many of these studies, reflecting the continuing influence of the initial ethnographic turn in rock art. Papers in this session highlight the diverse approaches to current global rock art research, in the process illustrating the interpretive advances that have been made in our understanding of this aspect of the archaeological record.

[157] Symposium · CENTRALIZING CENTRAL AMERICA: NEW EVIDENCE, FRESH PERSPECTIVES, AND WORKING ON NEW PARADIGMS

Ironically, Central America has tended to be peripheral in Latin American archaeology, as scholars (and their funding agencies) have gravitated to the more glamorous cultures of Mesoamerica and Andean South America. Nevertheless, a growing cadre of young Central American archaeologists (and a handful of intrepid international scholars) have followed in the footsteps of such trailblazers as Baudez, Coe, Cooke, Haberland, Lange, Lothrop, Stone, and Willey. This session will present new evidence and fresh perspectives from Central America (including El Salvador, Honduras, Nicaragua, Costa Rica, and Panama), organized around the themes of cultural ecology, complexity, regional interaction, and social identities. Presenters include scholars who have recently contributed to a publication series on the cultural mosaic of ancient Central America, as an opportunity to further expand their research and develop stronger linkages across the region. As we move from the substantive to the more theoretical, we hope to move Central American archaeology toward more anthropologically engaged interpretations.

[158] Symposium · UNDERWATER AND COASTAL ARCHAEOLOGY IN LATIN AMERICA (SPONSORED BY ISLAND AND COASTAL ARCHAEOLOGY INTEREST GROUP)

Today, underwater and coastal cultural landscapes—whether from maritime, lacustrine, or fluvial origins—are primary data sources for numerous scientific disciplines, offering deeper insights into the dynamic relationship between humans and aquatic environments. A growing body of case studies is concentrating on underwater and coastal records from Latin America. Archaeological research in this area spans from the Mexican highlands to Patagonia and covers periods ranging from prehispanic to historical times. An increasing amount of material evidence from prehispanic societies in the region underscores Latin America's long-standing traditions centered on aquatic environment exploitation and management. This session will focus on the results obtained from underwater and coastal contexts in Latin America, aiming to strengthen the connections between coastal and underwater archaeological communities by building methodological bridges.

[159] Symposium · THE RISE AND APOGEE OF THE CLASSIC MAYA KAAU'L HEGEMONIC STATE AT DZIBANCHE

In recent years the notion that a hegemonic state known as the Kaanu'l dynasty dominated the Classic Maya Lowlands has become more widely accepted supplanting previous views of Maya states as inherently fragmented and volatile. This has occurred thanks to a series of epigraphic and archaeological discoveries throughout the Maya world. Since the early 2000s, it has been known that in the Early Classic period, the dynasty was situated at Dzibanche in southern Quintana Roo, before its long-known seat at Calakmul, Campeche. However, many aspects of this regime remain the subject of debate. First among them is the time and place of origin, its internal governing organization, the nature of its expansionism, and the political

control of kingdoms within its sphere of influence. In this session, we attempt to bring clarity to these issues by presenting new archaeological and epigraphic data from the most recent research projects at Dzibanche and other sites with political ties to the Kaanu'l dynasty. The resulting new perspectives on this regime from a variety of sources and contexts will support a more informed understanding of the nature of Classic Maya political organization.

[160] Symposium · CHECKING THE PULSE II, CURRENT RESEARCH IN OAXACA PART I

Building on the success of last year's symposium, Diálogos en Oaxaca Archaeology once again welcomes Mexican and American archaeologists to discuss ongoing research, upcoming projects, or any other questions and inquiries they may have in mind. By checking in with each other as often as possible, we can continue building this collaborative dialogue among archaeologists with a common goal—recording and preserving Oaxaca's ancient history for future generations. Presenters will discuss research projects from different regions and time periods of Oaxaca, expanding our knowledge about this important but understudied area of Mesoamerica.

[161] Symposium · CUANDO LOS SENDEROS DIVERGEN: RECONSIDERANDO LAS INTERACCIONES ENTRE LOS ANDES SEPTENTRIONALES Y LOS ANDES CENTRALES DURANTE EL 1RO Y 2DO MILENIO AEC / WHEN PATHS DIVERGE: RECONSIDERING INTERACTIONS BETWEEN THE NORTHERN AND CENTRAL ANDES, FIRST-SECOND MILLENNIUM BCE

En la región andina, la frontera política entre Ecuador y Perú ha sido concebida como un antiguo límite que definió dos áreas con distintos procesos de desarrollo cultural —Los Andes septentrionales y centrales. Aunque varios investigadores han identificado conexiones entre ambas regiones, las investigaciones en cada país se han desarrollado generalmente de forma independiente, y con escasas colaboraciones y comparaciones. El presente simposio busca re-evaluar las interacciones entre las antiguas poblaciones de los Andes septentrionales y centrales durante el primer y segundo milenio AEC, cuando este borde empieza a fortalecerse, haciendo hincapié en las comparaciones que incorporan nueva información disponible de proyectos que se han desarrollado desde la década de los 90s. Como ejemplos de estas interacciones, invitamos a presentar trabajos que consideren discusiones sobre temas tales como comercio, intercambio, y análisis arqueométricos; además de evaluaciones a nivel local y regional sobre las similitudes y diferencias tanto tecnológicas, estilísticas, como de organización socio política. Esperamos que este simposio sirva para tender puentes y abrir espacios de diálogo con el fin de avivar futuras colaboraciones binacionales; al mismo tiempo que examinamos las distintas manifestaciones de esta división cultural en el pasado.

In the Andean region, the modern national border between Ecuador and Peru has become reified as an ancient cultural boundary separating two areas of distinct cultural development—the Northern and Central Andes. While researchers on each side have pointed to prehistoric connections that cross this boundary, scholarship in each cultural area has largely developed independently; comparisons and collaborations are infrequent. This symposium aims to reevaluate the interactions and relationships between the peoples of the Central and Northern Andes during the final two millennia BCE, when this cultural boundary is assumed to have begun to harden, emphasizing data-driven comparisons that incorporate new information made available by projects since the 1990s. As examples of the interactions under discussion, we invite papers considering both point-to-point discussions of trade and exchange, archaeometric compositional analyses of trade artifacts, and evaluations of zonal and regional similarities and differences evidenced through technology, style, and sociopolitical organization and dynamics. We hope that this symposium serves to stoke future binational collaborations that bridge both sides of this present political divide, as we examine the manifestations of that divide in the past.

[162] Symposium · LOCAL AND/OR EXOTIC INTERACTIONS: SYMBOLS, MATERIALS, AND SOCIETIES

Across the ages, prehistoric societies have interacted with each other, generating flows of finished artifacts, raw materials, symbolic items, and last but not least, people themselves that can be discerned archaeologically both among hunter-gatherer groups and farmers. Allochthonous materials and long-distance relationships

implied by their presence have usually played a major role within archaeological narratives, especially as signifiers of social and cultural complexity. Meanwhile the employ of local materials has usually been linked to domestic day-to-day activities, and less attention has been paid to their acquisition and movement within societies as a result. However, ethnographic and archaeological sources show us the importance of recognizing a dialectic interaction between both categories of materials in maintaining social and cultural entities in addition to representing social interactions in the archaeological record. We have brought together a group of papers that address the interactions between exotic and local materials and their complexity by making use of provenance studies, morpho-stylistic approaches, and spatial analysis. Our aim is to generate new insights into the mechanics of exchange across scales and the roles that it played within ancient societies.

[163] Symposium · EL PRINCIPIO DEL FIN, EL INICIO DEL PRINCIPIO: ARQUEOLOGÍA DE LA TRANSICIÓN DEL FORMATIVO AL CLÁSICO EN LOS TUXTLAS, VERACRUZ, MÉXICO

El sur de Veracruz es mejor conocido por dos ocupaciones culturales en el pasado prehispánico: los periodos formativo y el clásico; ambos con diferencias y evidencias visibles que los caracterizan. Sin embargo, como sabemos, los periodos cronológicos que establecemos, son artificiales y a veces nos impiden observar los procesos de cambio que articulan los fenómenos culturales. Así, este simposio pretende establecer diálogos que nos permitan comprender los cambios sutiles o profundos que se dieron en la región de Los Tuxtlas a través de las evidencias cerámicas y líticas, los patrones arquitectónicos, escultóricos y de asentamiento durante la transición del periodo Formativo al Clásico.

[164] General Session · MESOAMERICAN LITHICS

[165] General Session · SOUTHEASTERN SITES AND CULTURAL RESOURCE MANAGEMENT

[166] General Session · HISTORIES OF ARCHAEOLOGICAL PRACTICE

[167] General Session · INDIGENOUS AND COMMUNITY-BASED ARCHAEOLOGIES IN NORTH AMERICA II

[168] General Session · ARCTIC ARCHAEOLOGY

[169] General Session · BRONZE AND IRON AGE SOUTHWEST ASIA

[170] General Session · CRAFT INDUSTRIES AND INTERACTION NETWORKS IN EUROPEAN ARCHAEOLOGY

[171] Poster Session · GIS PART I: MAPPING MOVEMENT AND CHANGE

[172] Poster Session · GIS PART II: LOOKING AT THE LANDSCAPE

[173] Poster Session · BIG DATA IN ARCHAEOLOGY: DATA COLLECTION, MANAGEMENT, AND ANALYTICS

[174] Poster Session · LANDSCAPE, SURVEY, AND SETTLEMENT PATTERNS PART I

[175] Poster Session · LANDSCAPE, SURVEY, AND SETTLEMENT PATTERNS PART II

[176] Poster Session · NO, NOT TINDER: DATING METHODS AND CHRONOLOGICAL MODELING

[177] Poster Session · NEW AND EMERGING GEOPHYSICAL AND GEOSPATIAL RESEARCH IN THE NATIONAL PARKS

The posters featured in this session highlight the work of the National Park Service archaeology program, which conducts essential research to improve and expand on our understanding of our cultural heritage using new and emerging technologies. This session highlights ongoing surveys and research of the cultural landscapes, battlefields, and historic sites across the National Park Service with an emphasis on geospatial and geophysical surveys. With an emphasis on novel applications of minimally invasive methods, the presenters highlight exciting new research from across the National Park Service and in collaboration with partner organizations.

[178] General Session · EASTERN AND SOUTHERN SOUTH AMERICA**[179] Electronic Symposium · THE ARCHAEOLOGY OF FOOD AND FOODWAYS: EMERGING TRENDS AND NEW PERSPECTIVES**

This electronic symposium presents a cross-section of emerging trends and new perspectives on the archaeology of food and foodways. Ancient food studies comprise a field of inquiry that touches on all specializations in archaeology, including artifacts, biochemical and microbotanical residue analysis, archaeobotany, zooarchaeology, isotope analysis, studies of features and activity areas, experimental archaeology, and ethnographic research. Significant advances in environmental archaeology and archaeological science have enabled us to view and study human relationships with food in more depth and detail than ever before. Meanwhile, novel interpretive approaches have rendered new foodways visible and changed our understandings of food, a substance deeply imbued with cultural, economic, spiritual, and political significance. Scaffolding from this work, scholars and culinary specialists alike have applied archaeological findings to such domains as public policy (e.g., agricultural sustainability), culinary arts (e.g., the revitalization of food traditions), and dietary regimes (e.g., the decolonization of diets). In this symposium, we explore diverse perspectives on ancient foodways, from a number of geographical regions, material analyses, and interpretive approaches.

[180] Forum · HOW AMERICAN ARCHAEOLOGISTS CAN HELP COMBAT LOOTING

Cultural Property Agreements (CPAs) between the United States and foreign governments help to stop criminal activity at US borders by keeping looted and stolen art and artifacts out of American markets. Under US and international law, the United States can join CPAs to prevent looted and stolen antiquities and artifacts from entering the American art market, fighting the illicit trade while allowing the legal trade to continue and even thrive. Moreover, bilateral agreements aim to lessen global demand for illicitly obtained or looted objects—especially since the United States makes up some 45% of the global art market—while increasing responsible cultural exchange. The United States has signed CPAs with a growing number of countries around the world generating mutual respect, strengthening global law enforcement, and protecting archaeological heritage in situ. This forum will bring together experts from the fields of law, archaeology, and government to discuss the importance of these agreements and explain how American archaeologists can play an important role in supporting these agreements through testimony to the US government on emergent and enduring threats to cultural property.

[181] Forum · HIGHER EDUCATION IN CRISIS? A CONVERSATION ON ARCHAEOLOGY EDUCATION

In the last several years, cultural, political, and technological transformations have introduced both new challenges and opportunities in higher education, especially as related to diversity and inclusivity, rigor, and realized or communicated value. This roundtable addresses what archaeologists, students, and other educators see as the current and future landscape of archaeology education and strategies for moving forward in an increasingly complex environment. Issues under consideration include but are not limited to (1) classroom pedagogy, (2) new digital tools and the debate over the role of AI, (3) the centrality of Western canon in archaeological curricula, (4) and the liminal position of archaeology between the “hard” and “soft” sciences. Through this community discussion, we bring together a range of educators and students to speak on these critical topics, facilitating open discussion and identifying new paths forward.

[182] Forum · BRAIDING INDIGENOUS KNOWLEDGE IN ARCHAEOLOGY: SKODEN!

Indigenous archaeology has been characterized as being biased, amorphous, and not conducive to the rigid conventions of Western-based research paradigms. Such characterizations have derailed the underlying importance of utilizing locally based, Indigenous perspectives of the past. Practitioners of Indigenous archaeology contend that by grounding archaeological research within Indigenous perspectives and lifeworlds, archaeology begins to tell stories of the past that incorporate the lands, waters, and nonhuman relatives with which humans have always held relationships. These new stories provide us with a greater understanding of the breadth and variety of knowledge and relationships held in the past. This session will focus on sharing through storytelling by panelists of how Indigenous archaeology is being articulated in Indigenous ways by (1) sharing an example of how Indigenous archaeological methods have changed the story of the past, (2) what some of the approaches/methods/knowledge that have been braided with archaeological data/interpretations, and (3) what can be shared as being some of the ways that we can braid Indigenous knowledge and archaeological praxis? By the end of this forum, we hope to have shared stories that challenge notions of what research “is and should be” and share experiences and knowledge of enacting Indigenous archaeology.

[183] General Session · PLANTS AND PEOPLE**[184] General Session · EDUCATION AND ARCHAEOLOGICAL CAREERS****[185] Symposium · BEYOND THE ANCESTORS: NEW APPROACHES TO ANDEAN "OPEN SEPULCHERS"**

Spanish chroniclers stated that prehispanic Andean populations put more care into the construction of their sepulchers than their own houses. These sepulchers, collective tombs in which the dead were deposited allowing postmortem access for the living, are an integral part of Andean highland landscapes. They vary in both location and construction: whether positioned above- or belowground, partially or completely constructed, or situated within natural cave formations. Yet what all these monuments have in common is their geographic ubiquity in the highlands, ranging from the north of Peru to the north of Argentina. They have been given various names according to variations in typology (chullpa, machay, pucullo), but all can be gathered under the term “open sepulchers.” Based on ethnohistory, open sepulchers have long been interpreted through the lens of ancestor veneration. However, despite their prevalence, it is only recently that they have been systematically excavated. Over the last two decades, the application and integration of archaeological methodologies and scientific techniques have uncovered new information regarding these monuments. With this symposium, we aim to gather recent research on open sepulchers in order to understand and interpret their variations, meanings, and functions over time and across the geography of the Andes.

[186] General Session · TOOLS, TECHNOLOGY, AND CRAFTING IN ASIA**[187] Symposium · POWER TO THE PEOPLE: CULTURAL RESOURCE INVESTIGATIONS ALONG UTILITY LINES GIVING A VOICE TO PAST AND PRESENT COMMUNITIES**

Cultural resource surveys being conducted for various types of utility lines under Section 106 and other federal permitting have allowed archaeologists the opportunity to investigate expansive, linear spaces that may have otherwise been overlooked by traditional research and sampling methods. Most importantly, the federal regulations afford consultation with Native American and other local stakeholders in a process that helps bring the past to the present and contributes to the present conversation about crucial cultural heritage and land management issues. Papers in this session illustrate recent CRM investigations conducted in southern New England by the Public Archaeology Laboratory Inc. (PAL).

[188] General Session · CENTRAL AMERICA AND NORTHERN SOUTH AMERICA**[189] General Session · ARCHAIC PERIOD ARCHAEOLOGY IN THE US SOUTHEAST****[190] General Session · AFRICAN FOODWAYS, SUBSISTENCE, AND SUBSTANCES**

[191] General Session · ISLAND AND COASTAL ARCHAEOLOGY**[192] General Session · CULTURAL RESOURCES AND HERITAGE MANAGEMENT****[193] General Session · THE INCA AND LATE HORIZON ANDEAN SOCIETIES****[194] General Session · MESOAMERICAN SUBSISTENCE AND FOODWAYS****[195] Forum · *SE HOW FEMA, MDAH, AND TRIBAL NATIONS WORKED TOGETHER TO ADDRESS A MOUND SLUMP ON MOUND A AT WINTERVILLE MOUNDS***(SPONSORED BY THE SOUTHEASTERN ARCHAEOLOGICAL CONFERENCE)*

In 2016, a catastrophic rain event caused Mound A at Winterville Mounds to slump. After a Federal Disaster Declaration, the Federal Emergency Management Agency (FEMA), the Mississippi Division of Archives and History (MDAH), and Tribal Nations began a process to address the mound slump. This panel will tell that story from the perspective of the lead participants, demonstrating the power of collaboration.

[196] Forum · IS ANYONE LISTENING? ETHICAL ACCOUNTABILITY IN THE SAA

Over the past 20 years, the SAA has strategically worked to promote ethical practices within the field of archaeology through such forums as the Ethics Bowl, the Ethics Committee, the Committee on Native American Relations, and discussions on repatriation. In addition, it maintains a partnership with the Register of Professional Archaeologists, which lays out standards for ethical archaeological research and offers a platform for filing grievances. While the SAA continues to make strides toward addressing problematic disciplinary conduct, recent public concerns over the organization's programming, membership policies, and approach to transparency and inclusion draw attention to a critical tension between ethical discourse and how these principles are enacted and enforced. This forum will explore two questions: How can the SAA and the field of archaeology be more accountable to the ethical principles and discourse of social justice that it seeks to foster? And, what does "support" look like at an interpersonal and institutional level? Through storytelling and critical discussion, this forum will work to develop actionable items that the SAA can implement in its broader decolonizing efforts and what membership (collective and individual) can do to facilitate these changes.

[197] Poster Session · DIGITAL ARCHAEOLOGY: 3D MODELING**[198] Poster Session · DIGITAL ARCHAEOLOGY: SIMULATION AND MODELING****[199] Poster Session · FRIENDS NOT FOOD: HUMAN AND ANIMAL INTERACTIONS BEYOND HUMAN DIET PART I****[200] Poster Session · FRIENDS NOT FOOD: HUMAN AND ANIMAL INTERACTIONS BEYOND HUMAN DIET PART II****[201] Poster Session · WHAT'S ON THE MENU? PART I: ISOTOPIC AND BIOMOLECULAR ANALYSIS****[202] Poster Session · WHAT'S ON THE MENU? PART II: BOTANICAL ANALYSIS AND STORAGE VESSELS****[203] Poster Session · CAPTURING AND SHARING VERMONT'S PAST: 3D IMAGING AS A TOOL FOR UNDERGRADUATE RESEARCH AND COMMUNITY ENGAGEMENT**

Since 2019, the Vermont State University Digital Archaeology Project, in partnership with the Castleton Innovation Lab, has focused on documenting and sharing Vermont's past through the use of diverse 3D technologies. Our activities have included documenting both archaeological and private artifact collections, collaborating with museums and historical societies to create interactive content, and extensive outreach

with K–12 school groups. 3D technologies have proven to be highly effective for digitally curating artifacts, reaching new online audiences, and connecting with younger students. The application of 3D imaging has also proven to be a remarkably effective tool for undergraduate research. Undergraduate archaeology, geography, and history students, trained in advanced 3D imaging and provided with open access to state-of-the-art 3D scanners, have engaged with Vermont’s past in new and innovative ways. Their work, in turn, has provided fresh opportunities to engage with local communities. The posters in this session highlight collaborative undergraduate research utilizing 3D imaging technologies to capture and share Vermont’s past in accessible and interactive formats.

[204] Symposium · THE VILLAGE, THE REGION, AND BEYOND: STUART STRUEVER (1931–2022) AND THE LOWER ILLINOIS RIVER VALLEY RESEARCH PROGRAM

Archaeology in the North American midcontinent and beyond has been keenly influenced by Stuart McKee Struever (1931–2022). Struever’s achievements between 1958 and 1984 in the lower Illinois River valley (LIV) helped shape knowledge of the regional archaeological record, studies of subsistence-settlement systems, multidisciplinary archaeology, archaeological database development, public archaeology, contract archaeology, deep site archaeology, and bioarchaeology. Struever’s archaeological projects attracted specialists from across fields such as zoology, botany, palynology, malacology, and geology. These scientists studied LIV archaeological materials and influenced subsequent developments of archaeological specialties. The Koster Project (1969–1979) was Struever’s most visible archaeological research and outreach effort, attracting thousands of professionals, students, and volunteers to the LIV. Struever’s charisma drew many to Kampsville, which was variously characterized as an exciting cauldron of new ideas and an archaeological commune. Struever pioneered deep site archaeology, multidisciplinary archaeology, and archaeological outreach at a grand scale. These research, education, and outreach efforts continue to guide programming in Kampsville, where the Center for American Archeology celebrates its 71st year. Here we emphasize Struever’s quarter century of midcontinental archaeological achievements and explore their influence in and beyond the region.

[205] General Session · ARCHAEOLOGIES OF GENDER AND SEXUALITY

[206] General Session · HISTORICAL ARCHAEOLOGY IN THE AMERICAS

[207] General Session · ARCHAEOLOGICAL LANDSCAPES AND DIGITAL ARCHAEOLOGY

[208] Lightning Round · WEIRD STUFF: ARCHAEOLOGICAL THINGS THAT EXCEED ANTHROPOLOGICAL CATEGORIES

Archaeological classification, with its tendency to generalize, can too often disregard peculiar and unexpected items that do not fit conventional cultural categories for materials, periods, or styles. Archaeologists tend to label findings according to assumptions regarding normative culture, and therefore they frequently avoid publishing anomalous or inexplicable things—or, worse, they rob those things of their significance by generically classifying them as examples of symbolic or ritual behavior. In this lightning round, participants will address this problem by exploring findings from excavations in the Andes and Amazon that are “weird” in the sense that they appear uncanny, odd, or singular when viewed from either an insider’s or outsider’s perspective. Participants will consider why—epistemologically or methodologically—archaeologists seldom account for “weird stuff.” Presentations may explore multiple interpretations for weird items, moving beyond preconceived anthropological or normative categories to offer a more grounded discussion of human-object relations in particular contexts. Although questions about the “weird” may be raised in many geographical contexts, this session focuses on South America, where materially distinctive objects have possessed special significance in many cultural traditions, and where Western ontological categories such as animate/inanimate, human/thing, spirit/body are often at odds with Indigenous modes of practice.

[209] Symposium · THINKING WITH, THROUGH, AND AGAINST ARCHAEOLOGY'S POLITICS OF KNOWLEDGE

For decades, advances in various strands of critical archaeologies have forced the discipline to grapple with its politics of knowledge. Building on these conversations, we examine the “categories, concepts, and ways of knowing” with which archaeological narratives are generated and reconfigured (Stoler 2016:10). This session reflects on the politico-ethical worlds that are interpellated when engaging “regimes of truth” (Stoler 2016). We ask participants to scrutinize topics pulled into the orbit of, and excised from, various research and political agendas. Topics include, but are not limited to, “labor,” “queer,” “difference,” “indigenous,” “race,” “enslavement,” “disability,” “religion,” and “ethics.” What histories emerge from attending to what constitutes our knowledge and what our knowledge constitutes? What politics, perspectives, and realities are created and foreclosed? What subtle forms of violence are revealed, but also deepened, concealed, or perpetuated? What “ethics” does this necessitate? Participants are also encouraged to draw on history, ethnography, literature, and language to engage archaeology’s politico-ethics of knowledge, as well as the politico-ethics of their own practices. What ways of narrating are interrupted? What does this mean for archaeology’s place in the world—personally, professionally, and in classrooms? What are the limits of such a project?

[210] Symposium · CHECKING THE PULSE II: CURRENT RESEARCH IN OAXACA PART 2

Building on the success of last year’s symposium, *Diálogos en Oaxaca Archaeology* once again welcomes Mexican and American archaeologists to discuss ongoing research, upcoming projects, or any other questions and inquires they may have in mind. By checking in with each other as often as possible, we can continue building this collaborative dialogue among archaeologists with a common goal—recording and preserving Oaxaca’s ancient history for future generations. Presenters will discuss research projects from different regions and time periods of Oaxaca, expanding our knowledge about this important but understudied area of Mesoamerica.

Basados en el éxito del simposio del año pasado, *Diálogos en Oaxaca* una vez más da la bienvenida a arqueólogas y arqueólogos mexicanos y estadounidenses y canadienses para discutir investigaciones en curso, próximos proyectos o cualquier otra pregunta o consulta que puedan tener en mente. Al comunicarnos entre nosotros con la mayor frecuencia posible, podemos continuar construyendo este diálogo colaborativo entre arqueólogos con un objetivo común: registrar y preservar la historia antigua de Oaxaca para las generaciones futuras. Los presentadores discutirán proyectos de investigación de diferentes regiones y períodos de tiempo de Oaxaca, ampliando nuestro conocimiento sobre esta importante pero poco estudiada área de Mesoamérica.

[211] Symposium · CONTINUED ADVANCES IN METHOD AND THEORY FOR COMMINGLED REMAINS

In 2012, Kathryn Baustian, Debra Martin, and Anna Osterholtz organized a session at the SAAs on commingled human remains in archaeological contexts, partly to get people in the same room talking about assemblages of human remains long thought to be data-poor and often relegated to appendices in site reports. In the 12 years since that session, a tremendous amount of research has been conducted highlighting the importance of commingled remains to overall site interpretation. Commingling, no matter how it occurs, tells a significant story about mortuary activity, site formation, and/or the changing curatorial standards within which we work as bioarchaeologists. In this session, we highlight methodological rigor and new viewpoints on how the interpretation of commingled remains brings depth and breadth to the understanding of lived experience in the past through methodological advances and/or richly nuanced interpretation into the actions that lead to commingling.

[212] Symposium · RITUAL VIOLENCE AND HUMAN SACRIFICE IN THE ANCIENT ANDES: NEW DIRECTIONS IN THE FIELD

Examples of ritualized violence, specifically human sacrifice, are often interpreted as religious/political acts and tools of statecraft employed to terrorize a population into submission. Alternate scenarios include a response to climate calamities and political disasters and the establishment of political/social alliances or

sociopolitical integration. To what extent are these proposals integrated into long-standing ideological and political structures in the Andean world? How should we understand the sustained occurrence of ritual violence in the central Andes for centuries before the arrival of the Spanish in the sixteenth century? The organizers of this symposium believe it is appropriate to hold an academic gathering to learn about new discoveries and analyses carried out by different research teams. More importantly, we want to delve deeper into the theoretical perspectives' scholars employ to interpret their case studies. Our main objective is to evaluate whether the examples presented belong to organized and sustained rituals imbedded in the social structure of the groups studied or if they resulted from exceptional circumstances. Although a combination of both could be the case, presentations and discussion in this symposium will foster new ideas and a better understanding of the complicated world of ritualized violence and human sacrifice.

[213] Symposium · PREHISPANIC MAYA MARKETPLACE INVESTIGATIONS IN THE THREE RIVERS REGION OF BELIZE: FIRST RESULTS

With National Science Foundation funding, in 2022 a group of eight independent projects, assisted by several consultants, began collaborating to investigate the hypothesized existence of an integrated market system in the Three Rivers Region of northwestern Belize during the Late Classic period (CE 600–850). While such systems are best understood on a regional level, regional integration and other aspects of exchange are difficult to gauge in the absence of known marketplace locations, which remain an important missing component of premodern market research worldwide. The coordinated research had four overlapping goals, two theoretical and two methodological. The principal theoretical objective was to confirm the existence of suspected marketplaces in the region; the second was to examine the comparability of goods between these marketplaces, specifically ceramics. Methodologically, the main goal was to test the feasibility of the configurational approach in identifying actual marketplace locations by applying a cross-culturally developed set of archaeological indicators. Additionally, researchers sought to assess the potential for coordinated investigation and data sharing across neighboring projects to mitigate the limitations of the usual, narrower geographical scope and problem-solving focus of each individual archaeological project. While research and analyses are still ongoing, this symposium presents the first results.

[214] Symposium · INTERACTIONS DURING THE EPICLASSIC AND EARLY POSTCLASSIC (AD 650–1100) IN THE CENTRAL HIGHLANDS: NEW INSIGHTS FROM MATERIAL AND VISUAL CULTURE

Interactions were an integral part of cultural dynamics since early times in Mesoamerica. Migration, exchange, conflict, trade, alliances, and marriages are just some of the mechanisms through which these relationships have been interpreted. Their manifestations in a diversity of material culture allow us to infer the nature and geographic scope of the contacts maintained by the societies under study. One of the characteristics of the Epiclassic/Early Postclassic, recognized since the 1950s, is the identification of similarities among materials, artifacts, forms, and styles over wide spatial and cultural distances. The objective of this session is to deepen in the meaning, implications, and mechanisms of interactions established between AD 650 and 1100 in and between the political entities of Central Mexico, and beyond, based on material culture as well as the different modalities of approach (typological, technical, iconographic, spatial).

**[215] Symposium · ANCIENT PASTORALISM IN A GLOBAL PERSPECTIVE
(SPONSORED BY ZOOARCHAEOLOGY INTEREST GROUP)**

Pastoralism and its cultural intersections link people and herd animals in close synergy. Around the globe today, millions of households continue to practice aspects of pastoralism, and the archaeological record is rich with evidence of pastoralists having substantial impact on the environment, political dynamics, dietary intake, ritual behaviors, and belief systems. While archaeological interest in ancient pastoralists has received increased attention over the past two decades, analyses seem to remain divided along the lines of specific methodologies or topical branches of archaeological inquiry. This session has two goals: (1) to reposition pastoralism as a foundation for critical anthropological theory, and (2) to encourage the blending of methodological approaches to the study of ancient pastoralist societies and how contemporary pastoralists fit into these new reflections. We invite participants who investigate pastoralism in any region of the world from a variety of theoretical perspectives (multispecies, political ecology, social network, and others) and

archaeological methodologies (such as zooarchaeology, spatial analysis, material culture analysis, iconography, and biomolecular analyses). We hope to create a new dialogue between researchers working in diverse regions in order to find common threads that animal-human relationships entangle.

[216] Symposium · LOS RITUALES DEL JUEGO DE PELOTA EN LA COSTA DEL GOLFO / BALLGAME RITUALS IN THE GULF LOWLANDS

El Juego de Pelota es una compleja y antigua celebración de los pueblos indígenas en Mesoamérica. En la Costa del Golfo de México, durante el Clásico, se desarrolló como un evento en que participaron población, élites y especialistas del juego, con implicaciones políticas, económicas, ideológicas y de cohesión comunitaria. Considerado como un ritual de fertilidad y sacrificio, el Juego de Pelota probablemente incluyó otros rituales, durante la construcción del edificio, antes del juego, de purificación por ayunos y temazcal, entrenamiento, festejos después del juego y otros. En esta sesión, se explora y dialoga entre varias fuentes de datos para ampliar la discusión. [The Ballgame is a complex and ancient celebration of indigenous people in Mesoamerica. In the Gulf Lowlands of Mexico, during the Classic, the Ballgame became an event that involved the participation of the population, elites and game specialists, with implications for politics, economics, ideology and community cohesion. Considered as a fertility and sacrificial ritual, the Ballgame may have included other public rituals, during the building of the court, before the game of purification by fasting or sweat bath, training, after-game feasting, and others. In this session, we want to explore various data sources to broaden the discussion.]

[217] Symposium · THE ARCHAEOBOTANY OF EARLY PEOPLING: PLANT EXPERIMENTATION AND CULTURAL INHERITANCE

Plants, and their products, are key to our lives. They provide the basis for foods, medicines, technologies, architecture, and well-being practices. Our interaction with plants in the present is supported by a wealth of cultural and ecological knowledge built up over millennia of living in different environments around the world. In this symposia, we will engage with current and emerging evidence for the early use of plants, focusing on the movement of early humans and our closest ancestors into new environments globally. This process of colonization incorporates interaction with new plant species, vegetation communities, and landscapes. As such it draws both on culturally inherited ecological knowledge and the ability to learn and experiment. We aim to foster discussion about this process and the archaeobotanical techniques required to examine it, and to consider the relationship of these early interactions to long-term trajectories of human-environment interaction.

[218] Symposium · 2024 FRYXELL AWARD SYMPOSIUM: PAPERS IN HONOR OF LUIS BARBA

(SPONSORED BY FRYXELL COMMITTEE)

Luis Barba has received this year's Fryxell Award for Interdisciplinary Research. To honor his long, prolific, and multifaceted career, we welcome research or review papers emphasizing the techniques, culture areas, and archaeological sites in which he has worked, including archaeological science studies in Mexican archaeology and Teotihuacan in particular, field geophysics, field geochemistry, and chemical residue analysis.

[219] Symposium · THREE SIDES OF A CAREER: PAPERS IN HONOR OF ROBERT L. KELLY

Robert (Bob) L. Kelly's career as an anthropological archaeologist spans five decades. In that time, he has authored 100+ articles, chapters, reviews, and books; been instrumental in shaping our field through his extensive engagement with the SAA; and conducted archaeological and ethnographic work around the world. One of the most significant elements of Bob's legacy is the students he has mentored throughout his career, many of whom today pursue research that aligns closely with his own interests. Papers in this symposium honor Bob by focusing on three topics that align with his own long-term research interests: radiocarbon chronologies, lithic technology, and hunter-gatherer archaeology.

[220] Symposium · THE BARBACOAN WORLD: RECOGNIZING AND PRESERVING THE UNIQUE INDIGENOUS CULTURAL DEVELOPMENTS OF THE NORTHERN ANDES

Barbacoan populations resided throughout Ecuador and southwestern Colombia during the Spanish conquest of the northern Andes. The Barbacoan World was a cultural matrix of comparable mortuary traditions (shaft tombs and burial mounds), monumental platform mounds, land-use strategies, statuary corpuses, rock art, ceramic forms, iconography, and more. There were extensive market economies with interregional exchange systems that connected the highlands, Pacific coast, and Upper Amazon. These societies demonstrated various adaptive responses to a period of increased volcanic activity emblematically characterized by the eruption of the Quilotoa volcano around AD 1280, which covered much of Ecuador in ashfall, marked the climatic transition from the Medieval Climate Anomaly to the Little Ice Age, and arguably led to several ethnogeneses through social reorganization. Several Barbacoan societies were colonized during the Inka Empire's northern expansion, but many of their cultural practices and languages survived into early Spanish colonialism, after which some highland Barbacoan languages were gradually replaced by Quechua. Today, only several societies still speak Barbacoan languages and maintain their respective traditions: the Chachi, Tsáchila, Áwa Pit/Kwaiker, Misak, and Totoró. The aim of this session is to recognize and preserve the unique cultural articulations and histories of Barbacoan societies, their neighbors, and their predecessors.

[221] Symposium · MULTIDISCIPLINARY APPROACHES TO THE SUBTERRANEAN

Subterranean features are particularly significant archaeologically because of the importance of the sacred, animate Earth in Amerindian indigenous cosmology. The subterranean is additionally important in often holding purely ritual assemblages that represent the field's best context for studying the archaeology of religion. A focus of growing importance is the examination of subterranean spaces where human remains are found because it is our contention that the deposition of human remains is always a significant event. In recent years the use of aDNA has helped to clarify the nature of the remains. This session brings together papers providing the latest insights from field investigation and laboratory research.

[222] Symposium · UNRAVELING THE MYSTERIES OF THE ISTHMO-COLOMBIAN AREA'S PAST: A SYMPOSIUM IN HONOR OF ARCHAEOLOGIST RICHARD COOKE AND HIS CONTRIBUTIONS

Archaeologist Richard Cooke has left an indelible mark on the study of our shared human history. This symposium seeks to commemorate his groundbreaking work and celebrate his extraordinary contributions. The symposium will commence with an exploration of Cooke's pioneering investigations that shed light on the history of Panama. His unwavering dedication to the past has enriched our knowledge of diverse indigenous cultures, revealing connections and interactions that span centuries. Attendees will share studies that exemplify how Cooke's discoveries transformed the way we perceive past societies and their legacies in lower Central America and northern South America. Moreover, Cooke's zooarchaeological innovations have redefined the practice of archaeology. From pioneering reference collections in Latin America and actualistic studies, his work has revolutionized the way we approach environmental archaeology. The final segment of the symposium will reflect on Cooke's lasting impact on the broader archaeological community. Colleagues discuss how his ideas influenced their own research and how his mentorship shaped the careers of budding archaeologists in Latin America. In essence, this symposium is a testament to Richard Cooke's remarkable contributions to archaeology. Participants will pay tribute to his enduring legacy, share knowledge inspired by his work, and reinforce their commitment to our past.

[223] General Session · THE ANDEAN LATE HORIZON AND HISTORIC PERIODS

[224] General Session · ARCHAIC PERIOD EASTERN WOODLANDS

[225] General Session · PALEOLITHIC AFRICA

[226] General Session · CULTURAL HERITAGE IN MESOAMERICA

[227] General Session · AFRODESCENDANT COMMUNITIES AND THE AFRICAN DIASPORA IN THE AMERICAS

[228] General Session · WOODLAND PERIOD EASTERN WOODLANDS

[229] Electronic Symposium · *SE HOPE FOR THE FUTURE: A MESSAGE OF RESILIENCY FROM ARCHAEOLOGICAL SITES IN SOUTH FLORIDA

As South Florida faces sea-level rise, increased hurricane strength, fires, and other impacts from modern anthropogenic climate change, what messages can we learn from the eons of human use and occupation of the area? This session is dedicated to resiliency in South Florida as revealed through archaeological research. How do we define resiliency? How can the archaeological record inform modern efforts at adaptation? This session includes research that focuses on the ability of past groups in South Florida to adapt to shifting resources, face the aftermath of hurricanes, build and modify their environments to exist during rapid fluctuations in sea-level rise, and thrive by exploiting natural resources in the South Florida environment. Given the unprecedented amount of new archaeological research focused on early Florida contexts, the time is right to draw together concrete examples from specific case studies as well as synthesize the long history of climate resilience that could have relevance to contemporary climate-based challenges.

[230] Symposium · RECENT ARCHAEOLOGICAL INVESTIGATIONS IN CHIAPAS, MEXICO

The Mexican state of Chiapas contains a diversity of cultural regions and ecological zones—Maya and Mixe-Zoque; highland, lowland, and coastal. In spite of the presence of several large projects, such as those focused on Palenque and the Grijalva Valley, there are large swaths of Chiapas that have been almost totally overlooked, and any understanding of Chiapan archaeology is fragmented and focused on the better-known sites. In this session, scholars will discuss the results of their recent investigations in diverse parts of the state. Papers can be in English or Spanish.

[231] General Session · SEEING AND NOT SEEING: FOSTERING INCLUSIVE ARCHAEOLOGIES

[232] General Session · WOODLAND PERIOD ARCHAEOLOGY IN THE US SOUTHEAST

[233] General Session · HISTORICAL ARCHAEOLOGY IN EUROPE

[234] Forum · NEW LIVES FOR OLD BONES: NEW APPROACHES TO THE ZOOARCHAEOLOGY OF HERITAGE COLLECTIONS

(SPONSORED BY ZOOARCHAEOLOGY INTEREST GROUP)

Zooarchaeological remains have been systematically collected from archaeological sites since at least the 1970s. At that time, many studies focused on basic identification, quantification, ageing and sexing, and osteometry. In the past 50 years, many important new methods and approaches to zooarchaeological and archaeological analyses have been developed. These include isotopic and ancient DNA studies, geometric morphometrics, community archaeology, paleopathological studies, and systematic butchery analyses, among others. This forum will explore how new methods and approaches have been applied to heritage faunal collections, and it will also address the challenges zooarchaeologists face in dealing with these heritage collections.

[235] Symposium · JUUKAN GORGE: THE STORY OF DESTRUCTION, EXCAVATION, AND REBUILDING

On the 24th of May 2020 the world was shocked to learn of the destruction of Juukan Gorge by mining company Rio Tinto as part of their mine expansion. Blasting of the gorge included severe damage to rockshelters known to be over 40,000 years old and containing a unique cultural history of the Puutu Kuntj Kurrama People. Public outcry ensued. The Australian Federal Government conducted a Parliamentary enquiry, and heritage protection legislation was changed. However, we question how effective have these

changes been and what lessons have been learned from this disaster. This session is provided by the PKKP Aboriginal Corporation and those who assisted with the archaeological investigations; originally and now as the Gorge is rehabilitated. In the session we present the history of excavations, destruction, re-excavation and attempts to move forward. This is the first public presentation of this information, discussing the extreme archaeological significance of Juukan and its place in the cultural landscape of the PKK.

[236] Symposium · THE INTERSECTION OF ARCHAEOLOGICAL SCIENCE AND FORENSIC SCIENCE

This symposium will focus on how the scientific methods used by archaeological scientists can contribute to forensic science investigations. Archaeological and biological anthropology methods have been applied in forensic investigations, especially for the recovery and analysis of human remains. This symposium will highlight how archaeological science can contribute meaningfully to validation and error rate studies of scientific methods applied in forensic investigations to meet evidentiary standards.

[237] Symposium · EXPANDING OUR UNDERSTANDING OF THE MOJAVE DESERT: EMERGING RESEARCH AND NEW PERSPECTIVES ON OLD DATA

The prehistory of the Mojave Desert is rich, expansive, variable, and applicable to a variety of research queries. For over 25 years, many archaeologists have expressed concern for the alarming underrepresentation of archaeological research in this region. These concerns include insufficient attention to issues that highlight the importance of variation across different sectors of the Mojave Desert and its adjacent areas. Despite the obvious opportunities for research, there have been limited investigations beyond compliance-based military installation and public works projects. Much of this research has been inadequately disseminated, which has been attributed to “gray” or unpublished data that remains unknown or inaccessible to the larger archaeological community. This session aims to highlight various archaeological research within the Mojave Desert in which researchers have examined old data to investigate past lifeways. By revisiting old data with new perspectives, methodologies, technologies, and theoretical frameworks, these researchers have posed multiplex inquiries that seek to apply broader spatial scales that unveil the inter- and intraregional complexity of the Mojave Desert.

[238] Forum · ARCHAEOLOGY SARA(H)S ROCK! A SESSION OF SARA(H)S

After years of being confused with another Sara(h)—don’t worry, we know it happens all the time—the Archaeology Sara(h)s that Rock Facebook group was established in 2019. Since then, the group grew to 42 members with two things in common: their love of archaeology and a lifetime of hearing “with or without an H.” Over the years the Sara(h)s’ support of one another and networking opportunities have grown. This session celebrates five years of the network of Sara(h)s and highlights collaborations between Sara(h)s. With Sara(h) stories aside, what can such a varied group of people from different backgrounds, educational experiences, and specializations do to support one another and advance our practice? This session is recommended for students and young professionals to hear from a variety of professional archaeologists in the field and how they found safe communities to collaborate with within the SAA. Also, fans of Sara(h)s. And of course any Sara(h) who wants to join us up at the podium.

[239] Symposium · ANCIENT LANDSCAPES AND COSMIC CITIES OUT OF EURASIA: TRANSDISCIPLINARY STUDIES WITH NEW LIDAR MAPPING

We search for models of distinctive human biocultural evolutionary processes through transdisciplinary studies of purely aboriginal complex societies that developed out of Eurasia for millennia, particularly in the New World. Since they formed independently without the influence of the Old World civilizations until European contact, we expect to extract evolving behavioral characteristics of *Homo sapiens* through time. We particularly focus on human’s uniquely developed cognitive systems through which we conceptualize, categorize, and often quantify time, space, nature, and societies (ourselves). We record ancient ritual centers and/or cities three-dimensionally with newly developed mapping systems to elucidate ideological, technological, and social advances as materialized. Combining detailed and precise maps created by drone-lidar, Slam-lidar, scanner, or photogrammetry devices, with archaeological information, we apply them to our enhanced archaeoastronomy programs to better understand how humans developed cognitive systems to

meaningfully divide and quantify time and space, often in relation to astronomical movements creating calendar systems, and finally located the nature and societies in them. We hope to ambitiously discuss the themes with experts in brain sciences, evolutionary psychology, and astronomy, among other related natural and social sciences.

[240] Symposium · REASSESSING CHUPÍCUARO–CUICUILCO RELATIONSHIPS IN LIGHT OF CERAMIC PRODUCTION (FORMATIVE MESOAMERICA)

This session focuses on the relationships between two Formative cultural cores: Chupícuaro in the Lerma valley and Cuicuilco in the Basin of Mexico, exploring the ceramic materials. In order to clarify the nature and intensity of these relationships, this symposium presents the first results of an interdisciplinary research project (CHUPICERAM) that focuses on the ceramic production processes, from the raw materials acquisition strategy to the finished product. A range of complementary tools used by archaeology, geology, and physico-chemical sciences are mobilized in order to identify the raw material provenance, define the manufacturing methods and recipes, and retrace the possible circulation networks. The methodical comparative approach is based on a representative sampling and integrating recent archaeological assemblages from the Chupícuaro region, and museum collections built up during excavations carried out in the first half of the twentieth century, both in Chupícuaro and Cuicuilco. These collections are evaluated with high-performance instrumentation adapted to sherds and/or complete objects: techno-stylistic study based on the analytical tool of chaîne opératoire, petrographic and mineralogical characterization, a wide range of chemical analyses, and a full set of noninvasive techniques. The crossing of all these data will make it possible to overcome the limits induced by stylistic analogies.

[241] Symposium · THE BIOARCHAEOLOGY OF THE PHALERON CEMETERY, ARCHAIC GREECE: CURRENT RESEARCH AND INSIGHTS

The Phaleron Bioarchaeological Project explores the complex lifeways of Archaic Greece during a particularly volatile period, which culminated in the formation of Athens as a polis and a complex democracy. One of the largest known cemeteries of ancient Greece, the Phaleron cemetery was in use from the eighth to fourth century BCE and was situated outside the boundaries and walls of Athens. It was located approximately 4 km southwest of the Acropolis near the port of Faliro, which served Athens during this period. Between 2012 and 2017, approximately 2,000 burials were excavated by Dr. Stella Chryssoulaki of the Ephorate of Antiquities of West Attica, Piraeus, and Islands. Most of these burials were simple pit burials, but other common forms include cists, jars, and cremations. This cemetery is also known for the interment of shackled, executed individuals in graves of varied size. As the individuals from Phaleron cemetery are the first to be systematically studied from the Archaic period, this project has the unique opportunity to not only explore the lived experiences of this non-elite population but also consider the impact of fluctuating socioeconomic, political, and cultural conditions during the creation and implementation of democracy and the rise of classical Athens.

[242] Symposium · WATER MANAGEMENT IN THE ANDES: PAST, PRESENT, AND FUTURE

Water is fundamental for life on earth, and, across the Andes, its fluctuating availability shaped the development of a broad range of hydraulic technologies. The vertical landscapes of this tropical mountain range saw surface runoff channeled from the high Cordilleras to broaden hydraulic catchments, water retention in lakes and wetlands feeding wide-ranging and complex interconnected canal systems, and groundwater dug up for sunken fields and wachaque systems across salinity gradients. Based on applicability, this session showcases the potential lessons for the present from the past hydraulic technologies. Therefore, this symposium sits at the interface of technology, ecology, and civilization. We call for papers that demonstrate current thinking on Andean hydraulic technology from perspectives including, but not limited to (1) developments in water harnessing technologies; (2) climate and environmental change adaptation in the past, including synching of cultural and environmental change; (3) dormant infrastructure restoration as low-cost measures to adapt to present impacts of climate change; and (4) studies on water symbolism in iconography, mortuary, and public ritual.

[243] Symposium · ARQUEOLOGÍA COLABORATIVA EN LOS ANDES: CASOS DE ESTUDIOS Y REFLEXIONES

La arqueología colaborativa parte de una auto-reflexión crítica que fomenta cuestionar el impacto de la arqueología en las comunidades vivas que rodean los sitios arqueológicos o espacios patrimoniales. Este tipo de arqueología promueve la incorporación de un componente ético y dialogante entre la praxis de la arqueología y los intereses, necesidades y expectativas de las comunidades donde se investiga (Colwell-Chanthaphonh y Ferguson 2008; Meskell, Sibongile y Van Damme 2008). Es así, que esta sesión tiene el objetivo de reflexionar y debatir sobre la relación entre los sitios arqueológicos y las comunidades vinculadas. Se invitan iniciativas centradas en diferentes partes de América Latina que presenten experiencias colaborativas que permitan generar un debate académico sobre el rol que juegan los sitios patrimoniales y, arqueólogas y arqueólogos en el contexto regional y nacional. Este debate nos permitirá discutir la vinculación entre arqueología, patrimonio, derechos culturales, desigualdad, manejo territorial, urbanismo, entre otros. Igualmente, se incentiva las propuestas de casos de estudio donde a través de educación patrimonial, arqueología comunitaria, arqueología pública, o una combinación de estas, los espacios patrimoniales hayan fomentado sinergias entre diferentes actores interesados, municipalidades, voluntarios, grupos de vecinos, comunidades descendientes, instituciones educativas, entre otros.

[244] Symposium · INTERDISCIPLINARY APPROACHES TO ROCK ART DOCUMENTATION, RESEARCH, AND ANALYSIS

(SPONSORED BY ROCK ART INTEREST GROUP)

Current rock art research is interdisciplinary, drawing methods from various fields and knowledge from multiple lines of evidence. These approaches augment and enhance rock art documentation, offer new strategies for effective site management, and facilitate new interpretive insights for rock art provinces around the world. This Rock Art Interest Group-sponsored session provides a forum to share recent rock art research from a wide range of topics that help us to better understand and contextualize rock art, including interpretive analyses, iconographic comparisons, photogrammetric and imaging techniques, Indigenous knowledge, landscape-based approaches, spatial analysis, and radiocarbon dating. The presenters in this symposium will discuss rock art from a global perspective, including regions within the USA, Mexico, Ireland, Oman, Australia, and Guatemala to offer a shared understanding of rock art research.

[245] Symposium · ISLANDS AROUND AFRICA: STATE-OF-THE-ART AND FUTURE DIRECTIONS

Inspired by recent publications, notably Mitchell's long-anticipated and much-needed "African Islands: A Comparative Archaeology," this session seeks to bring together leading research that centralizes the contribution of, and future directions in, African island archaeology. Africa has relatively few islands compared to other continents. However, Africa's islands have been central to the cultural, material, political, and socioeconomic growth of the continent in the past, and remain so today. Presentations that promote and showcase the rigorous work that has brought to light the enduring influence of Africa's islands on the continent and the wider world are encouraged. Presentations are welcome across thematic topics but may emphasize the long history of island cultural development, environmental outcomes of archaeological research, the impacts of colonialism on African society, the dynamic and influential role of religion, cuisine, and craft on island culture, the maritime context as a mechanism for connecting African islands to the world, and how molecular studies are helping reshape our knowledge of the fascinating islands that circumvent the continent. Speakers are encouraged to devote some time to discussing how to continue renewing and reinvigorating interest in the region's islands, as well as future directions for research.

[246] Symposium · THE MARKING AND MAKING OF SOCIAL PERSONS: EMBODIED UNDERSTANDINGS IN THE ARCHAEOLOGIES OF CHILDHOOD AND ADOLESCENCE

In the last 30 years, the archaeology of childhood and adolescence has gained traction to become an effervescent part of the broader discipline of archaeology. Childhood is a crucial period of life in which identity is formed as a dialogic process of social, environmental, material, spiritual, and cultural entanglements. This session examines embodied perspectives of children and/or adolescent experiences in archaeology, recognizing the body as a key site for ways of becoming, social practices, rites of passage, and

cultural transmission and its reworkings. In line with many earlier studies of childhood in the past, this session is multidisciplinary in nature, combining biological and social approaches. It is also rooted in critical, reflexive approaches to social lives in antiquity. In particular, it seeks to emphasize the diversity, temporality, and intersectionality of the making of social persons in the past that considers the dynamics of sex, gender, kinship, community affiliations, and, of course, age.

[247] Symposium · INTERDISCIPLINARY RESEARCH INTO THE LATE PLEISTOCENE OF EUROPE

Recent years have seen a rise in cross-disciplinary research into the Late Pleistocene from across Europe including paleogenomics, stable isotopes, remote sensing, and paleoproteomics. These techniques sit alongside traditional paleoanthropological and archaeological methodologies where the fusion of traditional and novel approaches leads to new and cutting-edge research. The Late Pleistocene is a crucial period for understanding biocultural interactions, movement, and population dynamics between Neanderthals and modern humans, as well as interesting and, at the moment, still poorly understood aspects of various Upper Paleolithic peoples. These new techniques, combined with standard archaeological approaches, are particularly well suited to addressing questions about how, when, and perhaps why these groups may have interacted, as well as when and where certain cultural innovations appeared.

[248] Symposium · ANCIENT MESOAMERICAN AND ANDEAN CITIES: OLD DEBATES, NEW PERSPECTIVES

Over the past 20 years, archaeologists working in the Andes and Mesoamerica have broadened the definitions on urbanism and emphasized the social, political, and economic relations within and between urban settlements. Urban centers in these regions developed much differently from other parts of the world and as such do not conform to Western notions of urbanism. This has prompted the use of new theories, technologies, and methods. Participants in this session revisit perennial questions and debates in Americanist urban archaeology and consider how our understanding of urbanism has changed over the last 20 years. In the process, contributors might also highlight both methodological and technological innovations, the diversity of urban forms and life in ancient Mesoamerica and the Andes, and how such spaces were constituted, experienced, or perceived in the past. Themes to be explored include, among other things, the economic foundations of cities; the spatial organization of urban centers, including dispersed and low-density urbanism; the materiality of urban places and things; urban planning and infrastructures; social arrangements; identities and inequalities; the relational aspects of urban-rural assemblages; and the dynamics and tensions between top-down and bottom-up political processes.

[249] Symposium · INTERDISCIPLINARY APPROACHES IN ZOOARCHAEOLOGY: ADDRESSING BIG QUESTIONS WITH ANCIENT ANIMALS

(SPONSORED BY ZOOARCHAEOLOGICAL INTEREST GROUP [ZIG])

Zooarchaeology is a powerful subfield in archaeology that can provide critical information on a wide range of topics including past foodway practices, ancient environments, taphonomic conditions of a site, and the nature of religious and social organizations of the past. Indeed, the analysis of faunal remains is an inherent part of archaeological research, providing vital insights into past peoples and societies. Contemporary archaeological research has become increasingly interdisciplinary through the integration of disparate datasets, perspectives, and techniques from outside disciplines. What can we learn about how human activities shaped past ecosystems through the integration of faunal and ecological datasets? What does the historic and archaeological record tell us about past societies? And how do community-based research methods help answer archaeology's big questions? The goal of this session is to highlight creative approaches that address fundamental questions about past societies and human culture that cannot be answered by zooarchaeology alone.

[250] Symposium · CRAFTING ARCHAEOLOGICAL PRACTICE IN AFRICA AND BEYOND: CELEBRATING THE CONTRIBUTIONS OF ANN B. STAHL TO GLOBAL ARCHAEOLOGY

Over the last four decades, Ann B. Stahl has been at the leading edge of Africanist and Americanist archaeology. Through a series of multiple, overlapping engagements across theoretical and methodological

registers, Stahl has crafted a new kind of archaeological practice that is simultaneously community-engaged, theoretically innovative, and future-oriented. In this session, we reflect on her intellectual improvisations and how they emerged out of a commitment to community-based, long-term fieldwork in Banda, Ghana. We consider the “communities of archaeological practice” inspired and built through Ann’s work and mentorship, as well as their implications for the direction of archaeology as a whole. Key themes include (1) how pasts, presents, and futures mingle in archaeological and digital worlds; (2) interdisciplinary engagements with materiality; (3) global entanglements and taste; (4) relationality and communities of practice; and (5) archaeology and education.

[251] Symposium · “THE CENTER AND THE EDGE”: HOW THE ARCHAEOLOGY OF BELIZE IS FOUNDATIONAL FOR UNDERSTANDING THE ANCIENT MAYA

In 1841, following his first historic trip to the Maya World, John Lloyd Stephens commented that between Belize City and the “inhabited part of Central America is a wilderness, unbroken even by an Indian path” and that “residence there is more confining than living on an island” (1841:19). While spectacular architectural remains and carved monuments pertaining to the ancient Maya were almost immediately recorded in the center of the Yucatán Peninsula, coastal areas like Belize had yet to yield similar results. Thus, many early archaeologists automatically assumed that what became the modern country of Belize was peripheral or, at best, on the edge of ancient Maya development. For many researchers in the Maya area, especially in modern countries surrounding Belize, this perspective continues to be espoused with little attention being paid to the Belizean archaeological data. Yet, the archaeology that has been undertaken in Belize has contributed disproportionately and significantly to our collective knowledge of ancient Maya civilization. This session highlights the many contributions that Belizean archaeology has made to the broader area of Maya studies and demonstrates how research in Belize has been at the leading edge of scholarly debates on ancient Maya prehistory.

[252] Symposium · BRINGING THE PAST TO LIFE, PART I: PAPERS IN HONOR OF JOHN M. D. POHL

This double symposium brings together a select group of archaeologists, ethnohistorians, museum professionals, and social justice advocates who have either collaborated with John M. D. Pohl directly or took inspiration from his remarkable half-century career. A trailblazer in the study of Mixtec, Nahuatl, and Zapotec civilizations of southern Mexico, Dr. Pohl is equally noted for bringing the ancient Indigenous past of the Americas to life through his numerous publications, collaborative field research, codical studies, blockbuster exhibitions, film and media production, dazzling artwork, and not least his inspired teaching at various universities across the United States. The panels are organized around two fundamental areas that reflect John Pohl’s interdisciplinary endeavors, the first in scholarship and the second in media and advocacy. The speakers are both current and former students together with emerging and senior scholars who are currently engaged in innovative research ranging from investigations into the Classic, Postclassic, and colonial cultural transformations across Mexico, Guatemala, and the United States; the use of cutting-edge technologies in the field and lab; digital media in museums and architectural reconstructions; and Indigenous representation in the public interpretation of their cultural histories.

[253] Symposium · *SE BIG DATA AND BIGGER QUESTIONS: PAPERS IN HONOR OF DAVID G. ANDERSON

This symposium celebrates the career and contributions of David G. Anderson to North American archaeology and beyond. From humble beginnings as a technician in contract archaeology, to the National Park Service, and ultimately his professorship at the University of Tennessee, Dave has had a big impact on the field, his friends and colleagues, and students at every scale of measure. Spanning the peopling of the Americas to the historic period, he has left an indelible mark on the field of archaeology in both the cultural resource management (CRM) and academic realms. Beginning with his early work on big CRM projects, such as Richard B. Russell and Fort Polk, to his later developments of big archaeological datasets, such as the Paleoindian Database of the Americas (PIDBA) and the Digital Index of North American Archaeology (DINAA), Dave has pursued ever bigger questions about the past throughout his storied career, elevating the field and all those around him.

[254] Symposium · DEMOCRATIZING HERITAGE CREATION: HOW-TO AND WHEN
(SPONSORED BY HERITAGE VALUES INTEREST GROUP)

After decades of calls for change, archaeologists are addressing the need to change our practice around knowledge production in profound ways. Archaeological practice has benefited from collaborating with diverse stakeholders and descendant communities in producing narratives around heritage. However, this can be difficult to accomplish in compliance-based work, and few archaeologists are trained to do this work. If done well, it can lead to a more democratic production of knowledge around heritage. Democratizing heritage production involves shifting power dynamics in who “rules” over the creation of narratives and investing authority in the “people” or descendant communities. Because of archaeology’s roots in colonialism, democratizing heritage is no easy task. Participants in this session provide examples of how they have employed democratic methodologies to disciplinary practice in all stages of a project and continuing after funding has ended. These case studies offer practical, how-to advice for academic and compliance-based projects.

[255] Symposium · CERAMICS AND ARCHAEOLOGICAL SCIENCES 2024
(SPONSORED BY SOCIETY FOR ARCHAEOLOGICAL SCIENCES)

The Ceramics and Archaeological Sciences is a welcoming venue for presenting research and insight on all aspects of ceramic analysis, production, consumption, and trade and their economic, political, social, aesthetic, cosmological, and phenomenological implications. Ceramics are one of humanity’s most durable products. The abundant geological presence, variability, and plasticity of their main ingredient—clay—have afforded humans in diverse world areas and times remarkable creativity and space for social expression through its manufacturing process. As a result, they are invaluable to scholars in answering diverse research questions supported by archaeological sciences, anthropological methods, and theories. In this session, supported by the Society for Archaeological Sciences, participants will approach these questions and present new data on ceramics, methodological applications, and theoretical insights.

[256] Symposium · ADVANCES IN MACROBOTANICAL AND MICROBOTANICAL ARCHAEOBOTANY PART I
(SPONSORED BY ARCHAEOBOTANY INTEREST GROUP)

This symposium, sponsored by the Archaeobotany Interest Group, provides a forum for the dissemination of recent methodological and theoretical innovations in both macrobotanical and microbotanical archaeobotany. Papers in this symposium span time and world regions and address the full range of research questions explored in archaeobotany, in order to display the current state of the field. The symposium welcomes the work of early-career scholars and established researchers alike, and invites presentations from academic, public, community, and compliance archaeology. The goal of this session is to explore recent developments in the study of human-plant interactions, and we welcome papers that highlight new archaeological case studies or new analytical techniques.

[257] Symposium · EXPERIMENTAL PEDAGOGIES: TEACHING THROUGH EXPERIMENTAL ARCHAEOLOGY PART I

Experimental archaeology has become a burgeoning field that has answered significant questions about human experience driven by the same curiosity, ingenuity, and creativity that allowed our ancestors to thrive. It has also captured the public imagination and provides thousands with a tangible link to a multitude of imagined pasts. This session aims to explore how archaeologists create those tangible links through experiential learning in the classroom, our communities, and our research sites. Papers will focus on the role of experimental archaeology in teaching students, stakeholders, and the general public about the activities of the archaeological past.

[258] Symposium · ACTIVATING HERITAGE: ENCOURAGING SUBSTANTIVE PRACTICES FOR A JUST FUTURE

Heritage isn’t a static reflection of some real (or imagined) past. Heritage does things: it engenders community, teaches history, celebrates diversity; it can also exclude people, reproduce ideologies, and create silences. Heritage is not a thing in itself but rather a set of relations (to the past and each other) that act on

and in the world. Nor is heritage beholden to the conventional disciplinary boundaries of archaeology. Instead, it puts archaeology to work in the world. Recognizing heritage's role as a nexus of social action, this session asks how archaeologists can engage in more substantive heritage practices that aim to dismantle systems of oppression and actualize a more just future. Individual papers present Indigenous and descendant community collaborations, projects that help transcend histories of conflict, and work that brings to light oppressed and silenced narratives. Contributors also offer critiques on archaeology itself, the limitations of heritage work, and the importance of redressing its failures. Reflecting on how archaeologists can and should conduct their work, the papers in this session generally share a pragmatic view that emphasizes not only how heritage does act in the world but how it might act more readily toward consciously anti-oppressive and even liberatory aims.

[259] Symposium · PAST HUMAN-SHARK INTERACTIONS

Shark remains from archaeological sites are not normally focused on, and this symposium will address that study gap. We bring together zooarchaeologists whose research has included sharks to stimulate idea exchange and further the field as a whole. Sharks were eaten, their vertebrae were used as beads and pendants, their skin used as shagreen, and their teeth were used in weaponry, jewelry, and as magico-religious items. Shark teeth in particular were traded to inland areas. Capture methods were unique among fin-fishers and included a range of unique fishing gear such as large wooden hooks, small dugout canoes, and sometimes shark rattles. Although most sharks were captured from warmer marine waters, some were also caught in more temperate areas, and so this symposium will appeal to a wide range of archaeologists.

[260] Symposium · THE COLUMBIAN EXCHANGE REVISITED: ARCHAEOLOGICAL AND ANTHROPOLOGICAL PERSPECTIVES ON EURASIAN DOMESTICATES IN THE AMERICAS

(SPONSORED BY AMERICAN ANTHROPOLOGICAL ASSOCIATION ARCHAEOLOGY DIVISION)

Over the past millennia, human communities around the globe have been profoundly impacted by increasing reliance on and entanglement with a broad range of domestic animals. In Eurasia, the early domestication of livestock like cattle, pigs, and caprines and more recent events like the domestication of horse in the Black Sea region, have conditioned diet, material culture, mobility, and worldview. Over the past few centuries, the spread of Eurasian domesticates into the Americas has occurred alongside the expansion of European colonialism—at times reinforcing the colonial project, and at other times facilitating Indigenous sovereignty and resistance. The expansion of these species in these new regions, and their adaptation to and adoption by Indigenous cultures, has often been partially chronicled in the historical record, positioning faunal analysis as an important source of insights into this key transition. This session will explore the dispersals of domestic animals in the Western Hemisphere and their roles in both colonial and Indigenous spheres through a zooarchaeological and anthropological perspective.

[261] Symposium · THE BOLONCHEN REGIONAL ARCHAEOLOGICAL PROJECT: 25 YEARS OF RESEARCH IN THE PUUC

The Bolonchen Regional Archaeological Project (BRAP) will complete its twenty-fifth year of research in the Puuc Region of the northern Maya lowlands in 2024. Codirected by Tomás Gallareta Negrón, William Ringle, and George J. Bey III, the BRAP has addressed a wide range of issues relating to the development and evolution of social complexity in the Puuc. Project findings have demonstrated that monumentality emerged in the region as early as 800 BC and that the Puuc experienced its own trajectory of demographic ebbs and flows up through a Terminal Classic period population boom. Extensive lidar coverage has ushered in a new phase of research, expanding the territorial and theoretical scopes of the project. Pursuing an integrative and extensive regionwide approach, the BRAP has overseen investigations at the sites of Kiuic, Xocnaceh, Yaxhom, Huntichmul, Muluchtzekel, Kom, and Paso del Macho, among others. Beyond its scholarly contributions, the BRAP has implemented a community engagement and environmental stewardship approach through its management of the Kaxil Kiuic Biocultural Reserve. In this session, BRAP-affiliated archaeologists review research milestones, present syntheses of findings from 25 years of research, and offer a vision for the next quarter-century of archaeological investigations in the Puuc region.

[262] General Session · ARCHAIC PERIOD IN THE WESTERN UNITED STATES**[263] General Session · ARCHAEOLOGICAL LANDSCAPES, HUMAN-ENVIRONMENT RELATIONS, AND SOCIAL RELATIONS IN OCEANIA AND AUSTRALIA****[264] Poster Session · ICONOGRAPHY, RITUAL, AND RELIGION****[265] Poster Session · LITHIC ANALYSIS PART I****[266] Poster Session · LITHIC ANALYSIS PART II****[267] Poster Session · CULTURAL RESOURCES AND HERITAGE MANAGEMENT AROUND THE WORLD****[268] Poster Session · WHAT'S ON THE MENU? PART III: FAUNAL ANALYSIS AND OTHER ANIMAL PRODUCTS****[269] Poster Session · CULTURAL RESOURCES AND HERITAGE MANAGEMENT IN THE AMERICAS****[270] Poster Session · MARS GENERAL MILITARY CRM POSTER SESSION**
(SPONSORED BY MILITARY ARCHAEOLOGICAL RESOURCES STEWARDSHIP INTEREST GROUP)

The Department of Defense's responsibility of cultural resources management and stewardship is a constantly changing and expanding challenge. As a federal agency, regulatory compliance, particularly the stewardship of archaeological resources, is a primary concern for DoD cultural resource management within a changing military environment of mission directives, goals, and challenges. Researchers within and outside of the DoD offer expertise and interest that can significantly assist the agency achieve its CRM responsibilities while maintaining military readiness.

[271] General Session · ETHNOARCHAEOLOGY AND CULTURAL HERITAGE IN THE ARCHAEOLOGY OF ASIA**[272] General Session · MORTUARY ANALYSIS****[273] General Session · TEOTIHUACAN AND ITS CENTRAL MEXICAN PREDECESSORS****[274] Forum · BEYOND ACADEMIA: PRACTICING ZOOARCHAEOLOGY IN NONACADEMIC SPACES**

(SPONSORED BY ZOOARCHAEOLOGY INTEREST GROUP)

What does it mean to work as a zooarchaeologist outside of academia? In the field of cultural resource management and other nonacademic spaces, the analysis and interpretation of faunal remains is considered a specialized and often unnecessary type of analysis. When zooarchaeologists are working with shorter project timelines and limited budgets, it can be a challenge to communicate the importance of zooarchaeological data to non-practitioners. Through collaboration with academic zooarchaeologists, it is possible to build a stronger foundation for the application of these data as a regular part of archaeological interpretation. With testimonials from professionals who have practiced zooarchaeology in both academic and nonacademic settings, this forum highlights the ways in which zooarchaeological method and theory can contribute to our work as archaeologists outside of the classroom and addresses the gap between academic and nonacademic zooarchaeology.

[275] Symposium · THE PAST, PRESENT, AND FUTURE OF WATER SUPPLIES

The Earth's population has hit 8 billion people at the same time that our climate is changing. How will governments ensure adequate supplies of clean water while some regions are becoming drier and others are

experiencing increased flooding? In this session, we present insights into the past, present, and future of water supplies using archaeological case studies across space and time. Supplying water to populations is often wrapped in local politics, requiring decisions as to who gets water and how much can be taken. Oftentimes the water source is far from the consumption point, requiring control of vast territories to ensure adequate supplies. The storage of water can be essential to a population's resiliency, but capturing water for future use requires engineering as well as conservation measures. Excessive consumption of water is often a symbol of power and prestige, but it may signal that others are going thirsty. Such lessons can be part of water heritages that teach current and future generations about the dangers of overconsumption.

[276] General Session · MESOAMERICAN CERAMICS

[277] General Session · ARCHAEOLOGIES OF POLITICAL ORGANIZATION

[278] General Session · HISTORICAL ARCHAEOLOGY IN THE CARIBBEAN

[279] General Session · MISSISSIPPIAN PERIOD ARCHAEOLOGY IN THE US SOUTHEAST

[280] Forum · CREATING FAIR AND CAREING ZOOARCHAEOLOGICAL DATA: CHALLENGES AND SOLUTIONS

Zooarchaeological data is pivotal to answering the key anthropological questions, but it is derived using research methods from across the sciences and humanities, cross-cutting all world areas, time-periods, and cultures. It is used to understand the past while tackling the problems of the present and future. In order reach our full potential, zooarchaeological data must be made openly available for integration across disciplines, methods, and communities: it must be FAIR (Findable, Accessible, Interoperable, and Reusable). But it is also very clear that open-access zooarchaeological data must meet ethical guidelines for inclusivity and appropriate use, such as those defined in the CARE principles (Collective Benefit, Authority to Control, Responsibility, Ethics). This is a tall order, but it is essential to the future of our discipline. In this discussion-based forum, we aim to explore challenges and solutions for creating zooarchaeological data that meets the requirements of both FAIR and CARE principles. Forum goals include to (1) provide known solutions for some of the common challenges, (2) form collaborations to tackle challenges for which solutions are possible in the near future, and (3) create a forum for learning about community-voiced challenges.

[281] Poster Session · ROCK AND ROLL (AND SOIL): GEOARCHAEOLOGY

[282] Poster Session · EXPERIMENTAL ARCHAEOLOGY

[283] Poster Session · REMOTE SENSING AND GEOPHYSICS

[284] Poster Session · CERAMICS ANALYSIS PART I: TRADE, SOCIAL ORGANIZATION, AND IDENTITY FORMATION

[285] Poster Session · CERAMICS ANALYSIS PART II: PRODUCTION, USE, AND METHODS OF ANALYSIS

[286] Poster Session · WHAT'S GOING ON OUT THERE? METHODS AND FIELDWORK

[287] Poster Session · CERAMIC PETROGRAPHERS IN THE AMERICAS: RECENT RESEARCH AND METHODOLOGICAL ADVANCES

The Ceramic Petrographers in the Americas (CPA) is a network of scholars based across North and South America who are committed to the use and advancement of optical petrography in the analysis of ceramic assemblages from anywhere in the world. Having maintained a consistent presence at the SAA meetings since our first poster session back in 2018, this year's session showcases not only what petrographic data can tell us about the selection of raw materials and manufacturing techniques but also the wide array of additional

characterization methods used to determine the source of those materials (e.g., neutron activation analysis, portable X-ray fluorescence, spectroscopy, X-ray diffraction, and thermoluminescence). The research featured here involves projects based in the southeastern and southwestern United States, Jamaica, Peru, Colombia, Argentina, and Egypt. From the crafting of communities to geoarchaeological and chronological applications to the potential for automating data collection, the posters in this session highlight the variety of questions being addressed by this niche group of specialists whose expertise can never be fully replaced by artificial intelligence.

[288] Symposium · ADVANCES IN MACROBOTANICAL AND MICROBOTANICAL ARCHAEOBOTANY, PART II

(SPONSORED BY ARCHAEOBOTANY INTEREST GROUP)

This symposium, sponsored by the Archaeobotany Interest Group, provides a forum for the dissemination of recent methodological and theoretical innovations in both macrobotanical and microbotanical archaeobotany. Papers in this symposium span time and world regions and address the full range of research questions explored in archaeobotany in order to display the current state of the field. The symposium welcomes the work of early-career scholars and established researchers alike, and invites presentations from academic, public, community, and compliance archaeology. The goal of this session is to explore recent developments in the study of human-plant interactions, and we welcome papers that highlight new archaeological case studies or new analytical techniques.

[289] Symposium · THE CURRENT STATE OF ARCHAEOLOGICAL RESEARCH ACROSS SOUTHEAST ASIA

(SPONSORED BY SOUTHEAST ASIAN ARCHAEOLOGY INTEREST GROUP)

From Myanmar to the Philippines, Southeast Asia encompasses a deep history with a wide set of cultures. Over the last few decades, archaeological research in this area has experienced significant advancements in terms of theoretical approaches, methodological developments, and archaeological discoveries. New and continuing scholars and field projects have been substantially contributing to an evolving archaeological dataset. In an endeavor to present the rapidly changing state of archaeological discourse, a collection of scholars will discuss the progression and findings of research within their areas of interest. In this fashion, a diversity of topics will be presented from recent archaeological fieldwork throughout Southeast Asia. This will also assist in a continued effort to encourage a flourishing community of developing and established scholars.

[290] Symposium · WAYS TO DO, WAYS TO INHABIT, WAYS TO INTERACT: AN ARCHAEOLOGICAL VIEW OF COMMUNITIES AND DAILY LIFE

Archaeology reconstructs ancient daily life through material culture. The objects, spaces, and evidence of social interaction make the history of the people and community and are appreciable sources for the reconstruction of social history. The study of daily life refers to the transformation of cultural forms (objects, architecture, landscape, language, interactions) created by humans in society to satisfy their material, emotional, and spiritual needs. The study of objects through a technological perspective provides information about the persons, their needs, traditions, identity, and ritual economy. The study of urbanism and landscape looks at people's interactions in urban space and how the space is conceived, built, and inhabited by people. Interactions are essentially communication processes involving the movement of information, people, and even objects. In a dynamic of interaction, the cultural and information transmission process (which, in its broadest sense, includes technological knowledge, rituals, and symbolic concepts) becomes quite complex. In this round table we will discuss technology, language, people, landscape, urbanism, and local and long-distance interactions from different theoretical perspectives in West Mexico. The objective is to open a space for young researchers to present new proposals to get closer to the knowledge and understanding of the past.

[291] Symposium · MOUNTAINS, RAIN, AND TECHNIQUES OF GOVERNANCE IN MESOAMERICA

Mountain shrine sites have a deep history in Mesoamerica going back to the Preclassic and likely earlier. Along with the widespread proliferation of intensive agriculture, mountain sites such as Chalcatzingo appear

to be related to rain rituals, human sacrifice, and perhaps even the kinds of warfare that might produce sacrificial victims. These mountain sites often feature excellent vistas from which trade routes can be monitored visually, game-identified, and enemies checked. According to research over the last two decades, it is clear that Teotihuacan built up these sites as a technique of governance during its expansion into Oaxaca, the Isthmus of Tehuantepec, the Yucatán Peninsula, and perhaps points west. The mountain or hill sites tend to relate to Tlaloc and rain rituals, warfare, obsidian, and prime lookouts, a trend also common for the Early Classic Maya. The Postclassic peoples of Central Mexico, such as the Aztecs, may have carried on these traditions. Our session explores the proposed patterns as culture-specific or pan-Mesoamerican in nature via comparisons of site and artifact data from throughout Mesoamerica but with a special focus on Teotihuacan Expansion during the Classic period.

[292] Lightning Round · ONE HUNDRED YEARS OF EXCELLENCE: THE MIDDLE AMERICAN RESEARCH INSTITUTE AT TULANE UNIVERSITY

The Middle American Research Institute (MARI) at Tulane University has had the mission of developing innovative research, promoting responsible stewardship, and increasing appreciation for the indigenous cultures of Mexico and Central America since its inception in 1924. As evidenced by its 100-year history of groundbreaking scholarly efforts, it is one of the oldest academic institutions in the United States focusing on indigenous cultures of Mexico and Central America. MARI began supporting archaeological, ethnographic, and linguistic research in Mesoamerica through projects, expeditions, and field surveys in the 1920s. These traditions have continued without interruption to the present day. One of MARI's primary responsibilities, in addition to research, has been the proper care of the irreplaceable and one-of-a-kind archaeological and ethnological collections entrusted to it. It has also amassed an invaluable archive of documents, photographs, drawings, and notes that shed light on the professionalization of anthropological disciplines in North America. This lightning-round session includes comments from students, researchers, and colleagues who have been inspired, encouraged, and aided by the Institute's support of a diverse and interdisciplinary approach to the study of Mesoamerica.

[293] Symposium · TRANSFORMATIONS IN PROFESSIONAL ARCHAEOLOGY

Our profession is rapidly changing. Professional archaeology is currently amid a period of significant transformation. This symposium addresses the current changes in professional archaeology brought on by the effects of social justice movements, inclusion/diversity/equity initiatives, projected and current labor shortages in the private sector/consultant spaces, increased collaboration with descendant communities, prioritized safety in workplaces, disconnects between formal education/training and professional skills/responsibilities, our contribution to climate change, sustainability, and resiliency policy, infrastructure legislation and the effects on CRM/HRM industry, the focus on wellness in career management, the renewed emphasis on professional conduct and accountability, and changing views of mental health including substance use disorders. The impacts of the above, among other current issues, are resulting in a sea change for our profession and our careers. This session aims to give voice to some of these topics and the effect on the profession of archaeology—today and into the future. This is not a symposium about theoretical trends in archaeology but rather about the forces shaping professional archaeology today.

[294] Symposium · EXPERIMENTAL PEDAGOGIES: TEACHING THROUGH EXPERIMENTAL ARCHAEOLOGY PART II

Experimental archaeology has become a burgeoning field that has answered significant questions about human experience driven by the same curiosity, ingenuity, and creativity that allowed our ancestors to thrive. It has also captured the public imagination and provides thousands with a tangible link to a multitude of imagined pasts. This session aims to explore how archaeologists create those tangible links through experiential learning in the classroom, our communities, and our research sites. Papers will focus on the role of experimental archaeology in teaching students, stakeholders, and the general public about the activities of the archaeological past.

[295] Symposium · “THE CENTER AND THE EDGE”: HOW THE ARCHAEOLOGY OF BELIZE IS FOUNDATIONAL FOR UNDERSTANDING THE ANCIENT MAYA, PART II

In 1841, following his first historic trip to the Maya World, John Lloyd Stephens commented that between Belize City and the “inhabited part of Central America is a wilderness, unbroken even by an Indian path” and that “residence there is more confining than living on an island” (Stephens 1841:19). While spectacular architectural remains and carved monuments pertaining to the ancient Maya were almost immediately recorded in the center of the Yucatan Peninsula, coastal areas like Belize had yet to yield similar results. Thus, many early archaeologists automatically assumed that what became the modern country of Belize was peripheral or, at best, on the edge of ancient Maya development. For many researchers in the Maya area, especially in modern countries surrounding Belize, this perspective continues to be espoused with little attention being paid to the Belizean archaeological data. Yet, the archaeology that has been undertaken in Belize has contributed disproportionately and significantly to our collective knowledge of ancient Maya civilization. This session highlights the many contributions that Belizean archaeology has made to the broader area of Maya studies and demonstrates how research in Belize has been at the leading edge of scholarly debates on ancient Maya prehistory.

[296] Symposium · THE PROBLEM OF THE MONUMENT: WIDENING PERSPECTIVES ON MONUMENTALITY IN THE ARCHAEOLOGY OF THE ISTHMO-COLOMBIAN AREA

The first millennium CE witnessed incipient forms of monumental traces across landscapes of the Isthmo-Colombian Area, from parts of Honduras to Colombia. Still today, mounds and rock art remain the most visible traces of indigenous pasts. This symposium brings together recent research from various parts of this area and with different archaeological foci. The symposium is intended to capture a wider scope of the notion of monumentality, going beyond form and history to include studies that expand into discussions of durable traces, such as rock art, larger geomorphological features, and crossing over between material categories as, for example, stone, sediments, aquatic environments, and particular biotic spheres. The symposium asks if such features human-made or human-regarded are also monumental by positing that such durable traces define or make spaces. By doing so, the symposium intends to argue that the physical surroundings of Central America and Colombia were filled with natural features and physical forms that recalled time, as things from earlier, and structured human movement, as orienting way signs.

[297] Symposium · BUILDING BRIDGES: PAPERS IN HONOR OF TERESITA MAJEWSKI

Inspired by Teresita Majewski’s many contributions to the discipline of archaeology—especially in the areas of historical archaeology and cultural resource management—the papers in this session advance our understanding of pivotal issues in those fields. Contributors explore the central themes of Majewski’s work, including questions about variation in ceramics, food heritage and food tourism, colonialism, consumerism, collections management, tribal consultation, and the ethical and practical challenges facing the global industry of heritage management. Reflecting on her legacy of professional service and mentorship, these papers also consider how much this “invisible work” has and continues to shape our field.

[298] Symposium · IN DEFENSE OF EVERYTHING! CONSTRUCTIVE ENGAGEMENTS WITH GRAEBER AND WENGROW’S PROVOCATIVE CONTRIBUTION

“The Dawn of Everything” by David Graeber and David Wengrow has been one of the most widely read and impactful archaeological books published in recent years. The book has been enthusiastically received by the general public but has received both praise and criticism within the academic community. Many critiques of the book have focused on specific disagreements with respect to the ethnographic or archaeological record, rather than discussing the book’s main arguments and theoretical contributions. In this session we seek to engage with the book’s overarching ideas and move forward its core claims for the diversity of human social organization and lived experiences. We bring together scholars from around the world who have found the book’s claims both provocative and useful. We hope that participants will not only discuss the book’s arguments but also expand these concepts to other archaeological cases. Our goal is to build constructive criticism and foster an engaging discussion that moves these concepts and contributions forward toward a better understanding of our shared past and wider understandings of the possibilities for future forms of social relations.

[299] Symposium · BEYOND BORDERS AT THE END OF A MILLENNIUM: LIFE IN THE WESTERN ANDES CIRCA 500–50 BCE

Borders and boundaries—political, temporal, environmental, stylistic—have shaped the trajectory of Andean archaeology. While archaeologists seek to communicate beyond such boundaries, the late Early Horizon/Final Formative (ca. 500/400–200/50 BCE) remains a period in Andean history in which geographic boundaries continue to shape dialogue. This session moves beyond the invisible boundaries and opens dialogue across western South America. The only boundary suggested for this session is to address contexts dating to part of the ca. 500/400–200/50 BCE date range. Generally, findings on this time range have identified intensification of trade, exchange, and migration; marked differences in food patterns, metallurgy, and craft work (beyond gold); increased fortifications; and the emergence of social inequality. This session seeks to move beyond relationships with / events following the collapse of Chavín. It is productive to identify what groups shared across the Andes to truly appreciate their local differences and what those differences mean for the trajectory of Andean history. This session brings archaeologists of various regions, specialties, and countries together to explore the commonalities and differences beyond temporal, political, environmental, and stylistic boundaries to have regionally robust dialogue.

[300] Symposium · HUMAN REMAINS IN THE MARKETPLACE AND BEYOND: MYTHS AND REALITIES OF MONITORING, GRAPPLING WITH, AND ANTHROPOLOGIZING THE ILLICIT TRADE IN A POST-HARVARD WORLD

Human remains as curios have a long history. Following recent revelations about and arrests for trading in donated individuals' remains from medical institutions, the archaeological component of the human remains trade is again under scrutiny. Scholars have researched isolated aspects of this illicit trade, often focusing on Indigenous remains, case studies, and broad issues of the commodification of these items. This symposium gathers diverse perspectives on these issues that analyze and contextualize this trade, reviewing existing and proposed new means for monitoring and stemming the human remains market, particularly relating to elements derived from archaeological and cemetery contexts. Individual presentations include ethical considerations of the human remains marketplace; analytical examinations of various human remains markets; grappling with anthropology's own troubled past with regard to human remains; fitting traded remains into a biohistorical narrative; identifying and consulting descendant communities regarding proper treatment and disposition of remains; and fitting the marketplace within legal schemes to ensure that enforcement occurs. Discussions of these efforts among the broader changes occurring in anthropology and bioarchaeology, the trafficking of human remains is again ripe for consideration to ensure that enough protection of these remains exist and that their humanity does not get lost during commodification.

[301] Symposium · THE ARCHAEOLOGY OF PROPERTY REGIMES

Under what conditions do property regimes come to be defined? What precipitates their emergence, transformation, or collapse? What kinds of property regimes facilitate sustainable resource management? Under which kinds is sustainability unachievable? Here we engage with a wide body of work on property regimes (including themes of land tenure, property rights, common pool resources, etc.) and leverage the archaeological record to facilitate a comparative perspective on, and to productively theorize, long-term histories of resource governance. Property regimes are arrangements that define rules, distribute rights, and delineate roles with respect to particular goods. These arrangements are often formalized through key institutions responsible for the management of resources, whether lineages, councils, communities, or more complex forms of government and bureaucracy. Variability in the management of resources can be measured across (1) the resources or goods being managed (e.g., abundance, distribution, labor requirements) and (2) the characteristics of key institutions through which rules, roles, and rights are determined. Through these two dimensions, property regimes can be formally assessed and compared. How open or closed are they? What are their degrees of flexibility, stringency, durability? Are they structured from the top down or bottom up? What are the ecological contexts? How are regimes enforced?

[302] Symposium · BRINGING THE PAST TO LIFE, PART 2: PAPERS IN HONOR OF JOHN M. D. POHL

This double symposium brings together a select group of archaeologists, ethnohistorians, museum professionals, and social justice advocates who have either collaborated with John M. D. Pohl directly or took inspiration from his remarkable half-century career. A trailblazer in the study of Mixtec, Nahua, and Zapotec civilizations of southern Mexico, Dr. Pohl is equally noted for bringing the ancient Indigenous past of the Americas to life through his numerous publications, collaborative field research, codical studies, blockbuster exhibitions, film and media production, dazzling artwork, and not least his inspired teaching at various universities across the United States. The panels are organized around two fundamental areas that reflect John Pohl's interdisciplinary endeavors, the first in scholarship and the second in media and advocacy. The speakers are both current and former students together with emerging and senior scholars who are currently engaged in innovative research ranging from investigations into the Classic, Postclassic, and colonial cultural transformations across Mexico, Guatemala, and the United States; the use of cutting-edge technologies in the field and lab; digital media in museums and architectural reconstructions; and Indigenous representation in the public interpretation of their cultural histories.

[303] Symposium · ENTANGLED LEGACIES: HUMAN, FOREST, AND TREE DYNAMICS

Globally, communities have often surrounded their everyday habitats, their sociopolitical centers, their burial grounds, and their sacred sites with symbolic and/or economically useful trees and plants. Archaeological perspectives demonstrate how cultural land use was a driver of ecosystem change through time. For example, forests once considered "wild" are now in many regions seen as the direct reflection of past human activity, as communities actively managed forested foodsheds and woodlands with important economic use. In other instances, trees can remain the longest lasting legacy of otherwise short-term occupations. This session gathers scholars of diverse regions of the world and temporal foci who apply varied data sources (archaeological, anthropological, and historical or a combination thereof) to speak to the importance of particular tree species for ceremonial and/or quotidian use or to the management of forests as cultural and natural landscapes. Papers highlight particular methods (e.g., GIS, anthracology, botanical surveys, pollen analysis, community engagement), theoretical perspectives (e.g., nonhuman object agency, historical ecology), and/or specific themes (settlement pattern analysis, spatial analysis, phenomenology, cultural landscapes) in their exploration of human-forest-tree dynamics.

[304] Symposium · AD 1150 TO THE PRESENT: ANCIENT POLITICAL ECONOMY TO CONTEMPORARY MATERIALITY—ARCHAEOLOGICAL ANTHROPOLOGY IN HONOR OF JEANNE E. ARNOLD

This symposium honors the legacy of Jeanne E. Arnold, a leading voice in California archaeology and a remarkably impactful mentor who made an indelible impact on the field of archaeological anthropology. On the whole, Jeanne's scholarship reframed complex hunter-gatherer-fisher societies as not mere exceptions to normative cultural evolutionary patterns but rather exemplars of creative social, political, and economic strategies that defy easy generalization and complicate expectations of agriculture as requisite to the emergence of institutionalized power differentials in and among human societies. Jeanne wrote and published prolifically, contributing seven books and 70 articles and book chapters to myriad theory-imbued discussions—technological innovation, craft specialization, the evolution of leadership, the organization of household labor, apprenticeship, consumption and leisure, and contemporary materializations of meaning and identity, among others. This impressive record of scholarship includes numerous publications with her students as well as with scholars from a wide swath of disciplines, demonstrating a remarkable commitment to collaborative, interdisciplinary approaches to studying the human condition. This symposium brings together an ensemble of scholars whose collective work exemplifies the dispositions, methodological rigor, analytic approaches, and theoretical foci pursued and championed by Jeanne E. Arnold.

[305] Symposium · IDEAS, ETHICAL IDEALS, AND MUSEUM PRACTICE IN NORTH AMERICAN ARCHAEOLOGICAL COLLECTIONS

(SPONSORED BY SAA COMMITTEE ON MUSEUMS, COLLECTIONS, AND CURATION)

The concepts of “collecting” and “collections” are integral both to museums and to archaeological practice, and North American museums and repositories curate an immense quantity and variety of archaeological material. The curation of collections and the use of collections in research, both envisioned as preservation of the archaeological record, are enshrined in the SAA’s “Principles of Archaeological Ethics.” At the same time and in tension with this ethical ideal, archaeology has a widely acknowledged “curation crisis” that encompasses shortages of space, funding, and labor. Moreover, museums and the wider discipline of archaeology struggle to develop practices that address the colonial legacies that are embodied in archaeological collections. This session will seek explore the ideas and ideals—tacit or explicit—that underlie archaeological collections in North American museums and repositories, how the reality of collections and curation practice articulates with those ideas, and how understanding these ideas can help shape our approaches to the materials in our care and the collections we accept in the future.

[306] Symposium · THE GLOBAL “IMPACT” OF PROJECTILE TECHNOLOGIES: UPDATING METHODS AND REGIONAL OVERVIEWS OF THE INVENTION AND TRANSMISSION OF THE SPEAR-THROWER AND THE BOW AND ARROW

(SPONSORED BY LITHIC TECHNOLOGY AND ANALYSIS)

Only hominids can effectively propel objects through space—projectile weapons have helped us occupy nearly every ecosystem on the planet. The most radical refinement to this armament was the bow and arrow, which is exclusive to *Homo sapiens*. Tracking these technologies in the past is a key challenge in global archaeology. This worldwide session encourages large-scale comparative perspectives. We invite papers that discuss methods, comparative baselines, and metric thresholds for more reliably identifying weapon systems based on projectile point measurements, regional overviews on the initial invention and cultural transmission of projectile technologies, relationships with other coincident changes (for example, demographic and economic shifts such as domestic plants and animals), and the impact of projectile technologies on conflict and war. In most regions, bows replaced spear-throwers, while in some regions they coexisted. Refined chronologies are key pieces to this puzzle, which allow us to better track independent inventions, the pace of cultural transmission, and whether other changes came before or after the initial appearance of new weapon systems.

[307] Symposium · CURRENT RESEARCH AND CHALLENGES IN ARCTIC AND SUBARCTIC CULTURAL HERITAGE STUDIES

In the Arctic and Subarctic, archaeological research and related field actors face similar challenges, responsibilities, and ethical concerns, despite a diversity of regional contexts and local specificities. Various established and early career professionals and students—archaeologists, historians, conservators, curators, site and museum administrators, and others—are invited to share their personal experiences and reflections regarding significant changes, current scopes and stakes, and new developments of archaeological research and heritage management in the circumpolar regions. The papers presented in this session are a sampling of the issues pertaining to the organization of past and ongoing research at various stages, such as elaborating research projects and fieldwork, public outreach, data and collections management, and museum studies. We also address recent advances in specific tools and methods that can be applied to cultural heritage studies.

[308] Symposium · BIG IDEAS TO MATCH OUR FUTURE: BIG DATA AND MACROARCHAEOLOGY

The archaeological record is uniquely positioned to answer big questions about human cultural change due to the vast spatial and temporal scope of the data. As such, anthropologists are increasingly analyzing and building large comparative archaeological datasets. Such broadscale analyses and syntheses of existing work have been proposed as key to answering questions about human behavior and evolution that are well outside the domain of other scientific fields. However, this kind of approach presents novel challenges; from what theories should guide our research, to how data should be collected, to how data should be analyzed and stored for posterity. In this session we invite researchers taking macroscale approaches to studying human

culture and behavior to present on new findings, challenges, and solutions. Our goal is to provide a summary about the state of the art of macroscale archaeological research.

[309] General Session · PRECLASSIC OLMEC AND MAYA

[310] General Session · WATER RESOURCES AND WATER MANAGEMENT

[311] General Session · HISTORIC PERIOD ARCHAEOLOGY IN THE NORTHEASTERN UNITED STATES

[312] General Session · HISTORIC PERIOD ARCHAEOLOGY AND CULTURAL HERITAGE IN THE US SOUTHEAST

[313] Forum · HOW TO GO FROM THE CLASSROOM TO THE PROFESSION: WHAT YOU NEED TO KNOW

Archaeology is changing. Technological advances, emerging social issues, and changes in the legal framework are drastically changing how archaeology is practiced. The result is expanded employment opportunities, most of which are in cultural resource management (CRM) and outside of academia. Regardless, such opportunities are highly competitive. Consequently, students entering the profession need to understand these new opportunities and what they need to know to transition from being a graduate student to a professional. This forum brings together professionals representing different aspects of the discipline to discuss where the profession is today and what is needed to succeed. The forum is aimed at those who have recently received their degree or are about to graduate and are trying to transition into the profession. The session will explore career opportunities and the skill sets graduates need to launch and advance their career.

[314] General Session · MESOAMERICAN SOCIOPOLITICAL ORGANIZATION

[315] General Session · ARCHAOMETRY AND MATERIALS ANALYSIS IN ASIA

[316] General Session · GEOARCHAEOLOGICAL APPROACHES TO THE PALEOAMERICAN PERIOD

[317] Symposium · *SE STAKES AND STONES: CURRENT ARCHAEOLOGICAL APPROACHES TO FISH WEIR RESEARCH

Mass capture strategies for fishing have been documented worldwide and in nearly every aquatic setting including riverine, estuarine, and coastal environments. In particular, fish weirs have been in use for millennia and their archaeological remains have been documented across North America, though their location, visibility, and material disposition have contributed to a lack of sustained archaeological attention. The papers in this symposium highlight recent efforts to document fish weirs in North America and situate these sites within the cultural landscape.

[318] General Session · HUMAN-ANIMAL RELATIONS

[319] General Session · ZOOARCHAEOLOGY IN NORTH AMERICA

[320] General Session · MESOAMERICAN LANDSCAPES

[321] General Session · DIGITAL ARCHAEOLOGY IN MESOAMERICA

[322] Forum · EXPLORING THE POTENTIAL FOR SENSORY ARCHAEOLOGY WITH MULTIMODAL APPROACHES, INCLUDING ETHNOARCHAEOLOGICAL MUSIC, IN THE AMERICAS

This forum will bring together archaeologists, ethnographers, musicologists, epigraphers, art historians, and other researchers to examine traces of sound production and other sensory elements associated with performances, ceremonies, and everyday life throughout the Americas. We will explore sociopolitical, geographic, and cultural contexts for evidence of sensory events. Scholars working with soundscapes, songbooks, musical instruments, visual representations, and other traces of sensory activity will share their perspectives, working to develop multidisciplinary avenues of inquiry informed through various multimodal approaches including what South American music scholar Dale Olsen characterized as “ethnoarchaeological music.” Olsen (2002:22) defines ethnoarchaeological music as “the cultural and interpretive study of music from archaeological sources.” Much like food, sensory cultural events and practices are shared when communities interact locally, regionally, and over great distances. Innovative techniques and technologies in the production of sensory events travel along trade routes and with migrating communities. This forum seeks to connect researchers studying Mesoamerica to examine the evidence of innovations and shared traditions in the archaeological record, thorough visual cultures and iconography, and documented in ethnographic narratives, to develop a broader understanding of multimodal practices across time in the region. This cross-disciplinary and geographically diverse conversation will open new possibilities in the field.

[323] Symposium · ARCHAEOLOGICAL APPLICATIONS OF NETWORK ANALYSIS

Within the last 25 years, archaeologists have begun to use powerful computers and sophisticated statistical algorithms to identify network structures in archaeological data. This network analysis enables us to better study human interactions and the diffusion of information and cultural traditions from the scale of individuals to whole societies. Network analysis also allows archaeologists to infer the strength and direction of relationships among nodes (e.g., individuals or social units) and ties (e.g., kinship or shared identities) at multiple scales. Measures of centrality permit the identification of nodes that exert a strong influence on the structure of a network, often leading archaeologists to interpret such nodes as individuals or geographical centers of prestige, information, goods, and/or power. Researchers’ approaches to selecting archaeologically visible behavior for study, abstracting those data into formal network concepts, and transforming the archaeological data into network data varies greatly. This symposium illustrates diverse archaeological uses of network analysis and demonstrates the sophisticated interpretations of human behavior that such an approach can facilitate.

[324] General Session · ARCHAEOLOGIES OF MILITARY CONFLICT**[325] Symposium · TAPHONOMY IN FOCUS: CURRENT APPROACHES TO SITE FORMATION AND SOCIAL STRATIGRAPHY**

As the physical accumulations of artifacts, ecofacts, and sediments, archaeological deposits comprise the basic units of empirical analysis and are routinely the focus of methodological concerns. In recent decades, a growing body of literature has emerged that not only focuses on site formation as a set of cumulative taphonomic effects but also as a process of sociocultural, political, and affective negotiation both in the past and present. We seek papers that explore the complex interplay between the empirical and interpretive dimensions of deposition, assemblage, stratigraphy, and other concepts related to the formation of the archaeological record. Papers may address any geographical or temporal setting. We also welcome diverse methodological and theoretical approaches to the theme. Contributors might explore issues of scale, resolution, and temporality; the mnemonic or semiotic roles of deposits and assemblages; challenges and implications presented by contested, multivocal sites and landscapes; archaeological concepts as epistemological metaphor (*sensu Foucault*), and more.

[326] Symposium · APPLICATION OF GEOPHYSICAL TECHNIQUES TO MILITARY ARCHAEOLOGY

(SPONSORED BY MILITARY ARCHAEOLOGICAL RESOURCES STEWARDSHIP INTEREST GROUP)

Geophysical techniques, including magnetometry, resistivity, and ground-penetrating radar have been used for decades as noninvasive tools of archaeological investigation. These methods can cover large areas, access depths well beyond the length of a shovel, and uncover subsurface patterns invisible to the naked eye. New remote technologies have been critical tools in the identification of burial sites and are being used to discover structures and hearth features, to document large sites, and even for mitigation. New technologies are making geophysical methods more accessible to average cultural resources managers where they can play a critical role in decision-making around sensitive areas and resource management. This session provides examples of applications of geophysical techniques in the DOD-CRM environment and provides practical advice regarding when and how to use different techniques as well as ways to access equipment and practitioners.

[327] Symposium · REINVENT, RECLAIM, REDEFINE: CONSIDERATIONS OF "REUSE" IN ARCHAEOLOGICAL CONTEXTS

Reuse is often seen as a sustainable behavior, invoking ideas of conservation or even renewal in contemporary contexts. As an ongoing practice, reuse also plays a role in archaeological contexts—where materials such as ceramic, metal, stone, and wood can be changed, reassembled, recontextualized with varying temporalities. These periods of reuse can complicate how we understand the past at multiple scales, from individual objects up to the reuse and repurpose of spaces. To navigate these practices, archaeologists use a variety of frameworks—object biographies, itineraries, palimpsests, etc.—to conceptualize these shifting uses. By placing various approaches to archaeological material reuse into conversation, it is possible to interrogate how these frameworks are used and how the various contexts, engagements, and power structures associated with reuse can be understood archaeologically.

[328] Symposium · ADVANCES IN GEOARCHAEOLOGY AND ENVIRONMENTAL ARCHAEOLOGY PERSPECTIVES ON EARTHEN-BUILT CONSTRUCTIONS

In recent years, advancements in geoarchaeology and soil micromorphology as well as other complementary analyses from environmental archaeology (e.g., geochemistry, palynology, geochronology) have aided in reconstructing complex histories of earthen constructions, such as mounds, platform surfaces, enclosures, and terraces. Innovative analyses have revealed building materials and techniques and episodes in their construction, maintenance, and uses, as well as past environmental conditions and changes. Furthermore, micromorphology has revealed taphonomic and pedogenic processes that alter their preservation. Other recent developments in geoarchaeology that combine techniques of soil micromorphology with geochronology (e.g., radiocarbon and luminescence dating) offer promising avenues to address major challenges in providing absolute dates for earthen-built structures, including their construction phases, events of maintenance and other associated human activities, environmental changes, and postdepositional alterations. Geoarchaeology and soil micromorphology, through the identification of construction materials and techniques and their absolute dating, reveal cultural choices and meaning behind these prominent, often multigenerational, landscape features and associated human activities. This session serves as a platform for researchers to present on novel applications of geoarchaeology and soil micromorphology, regardless of temporal or geographic focus, for advancing the identification and interpretation of sociocultural processes behind comparative earthen-built constructions.

[329] Symposium · VICKSBURG IS THE KEY: RECENT ARCHAEOLOGICAL INVESTIGATIONS AND NEW PERSPECTIVES FROM THE GIBRALTAR OF THE SOUTH

Vicksburg, Mississippi, has always been a place of great strategic, political, and cultural importance, and yet comparatively little systematic archaeological investigations have taken place at this “Gibraltar” of the American South. This symposium will focus on the geological, paleontological, and ecological conditions that make Vicksburg and its environs such a unique and culturally significant feature of the Lower Mississippi Valley, as well as summarize past archaeological investigations and interpretations that have been applied to this region. Additional papers will build off of this foundation and will reconsider the role of precontact and

historic period Indigenous peoples and their interactions with colonial powers played that set the stage for why Vicksburg became such a focal point for both the North and the South during the American Civil War. This symposium will conclude with preliminary investigations of the archaeological potential of disturbed contexts from the 1863 Vicksburg Battlefield itself and will also highlight preliminary findings and unexpected insights concerning Vicksburg's Civil War-era African American population as evidenced by ongoing bioarchaeological investigations of imperiled burials under immediate threat of destruction due to recent catastrophic landslides at the Vicksburg National Cemetery.

[330] Symposium · THERE AND BACK AGAIN: CELEBRATING THE CAREER AND ONGOING CONTRIBUTIONS OF PATRICIA B. RICHARDS

Patricia B. Richards has spent more than four decades immersed in the archaeology and bioarchaeology of the American Midwest. Through her field-based research into Paleoindian, postcontact, and Euro-American lifeways of the Great Lakes region, she has explored and highlighted the importance of material culture, human actors, ethnographic research, and engaged archaeology. Her work has consistently emphasized the power of archaeology to reveal the stories of those forgotten by written history, as exemplified by her creation of and long-term commitment to the Milwaukee County Poor Farm Cemetery Project. Her ethical approach to archaeological practice has been a constant in an ever-evolving career, serving as a touchstone of her advocacy for burial site preservation legislation in Wisconsin. She has also been an inspirational and inestimable mentor and colleague, and through the work of those she has trained and supported we see the positive imprint she has made on the discipline over the last decades. This session takes her retirement from teaching as an opportunity to recognize and honor her contributions to both archaeology of the Midwest and to archaeological pedagogy. Please join us as we share our favorite memories and present research inspired by her contributions to the field.

[331] Symposium · RETHINKING PERSISTENT PLACES: RELATIONSHIPS, ATMOSPHERES, AND AFFECTS

Persistent place is a term used by archaeologists to describe places that are used, occupied, or revisited by humans over a long period of time. Most studies see places as persistent due to the type, availability, and abundance of resources or because humans attribute these places meaning and importance. In this symposium, we question such approaches and instead concentrate on the relational and experiential qualities of persistent places and how relationships make such places meaningful, animate, affective, and ultimately attractive or beneficial over a long period of time. We especially encourage participants to consider relationships between nonhuman entities, phenomena, materials, objects, natural features, and entire landscapes in creating persistent places as well as the dynamic qualities and atmospheres that these relationships generate. Overall, the goal is to move beyond behavioral and anthropocentric perspectives to consider why persistent places draw, change, and ultimately shape humans and explore the ways in which such places are active participants in the creation of history and culture.

[332] Symposium · THE ARCHAEOLOGY OF EAGLE NEST CANYON, TEXAS: PAPERS IN HONOR OF JACK AND WILMUTH SKILES

The Lower Pecos Canyonlands of southwest Texas and adjacent parts of Mexico constitute a unique region at the juncture of the Chihuahuan Desert and the Great Plains where the Pecos, the Rio Grande, and their tributaries form deep canyons in limestone bedrock. The arid environment has supported a diverse range of cultural adaptations and lifeways, and is well known for its dry rockshelters, bison kills, polychrome rock art, and extensive plant-baking features, as exemplified at Eagle Nest Canyon. Landowners Jack and Wilmuth Skiles have been an essential part of preserving that record and supporting archaeological research through stewardship, access to their land, and their supportive collaboration with students, volunteers, and professionals. The Ancient Southwest Texas Project (ASWT) of Texas State University has worked with the Skiles family for the past 15 years with the goals of understanding and protecting the archaeological record, sharing results with the scholarly community and public, and training the next generation of archaeologists. The papers in this symposium highlight research accomplished in and around Eagle Nest Canyon through the ongoing collaboration between ASWT and the Skiles family and reflect the great potential that arises from strong relations between archaeologists and stewards of the land.

[333] Symposium · MAGIC, SPIRITS, SHAMANISM, AND TRANCE

Marcell Mauss in 1950 found that trance was important to magicians and shamans seeking to control unseen forces and beings. This included magic that consisted of creating/using material culture such as charms, offerings tied to locations (e.g., paintings and shrines), feasting/potions/ointments used for blessings and protection, etc. Although early anthropologists recognized trance's importance and the role of spirits in magic, Mauss and others (e.g., Evans-Prichard) exercised the importance of spirits and trance in magical practices. In doing so, they separated the acts/materials of magic from their ontological and cosmological importance. This in turn cut magic off from its spiritual and cultural importance, transforming it into "superstition" as opposed to being central rituals that structured people's lives. Anthropology in general, and archaeology specifically, needs to reintegrate magical/spiritual practices into their broader symbolic and cultural context to meaningfully understand and explain how cosmological principles were manifested as ontological realities. In this symposium we explore the use and form of trance and spirits integrated into cultural patterns of magic as it is reflected in modern practices and the ethnographic and archaeological records. These papers look at trance and magical processes at various scales and from different theoretical perspectives.

[334] Symposium · INTEGRATING ISOTOPE ANALYSES: THE STATE OF PLAY AND FUTURE DIRECTIONS

Isotope analysis has long developed into an established method in the bioarchaeologist's toolkit, particularly for exploring mobility and paleodiet. Methodological advancements are progressing at an extreme rate, providing ever wider applications and greater interpretative potential. There is increased recognition that isotope analysis is better suited to exclude rather than place definite interpretations. Crucially, studies are now integrating isotope data with multifactorial archaeological, environmental, and osteological evidence at varying scales, a feature that was frequently absent from early studies. This session aims to take stock of the state of the field and its relationship with other subdisciplines by focusing on case studies that take an integrative approach. Starting with an inclusive definition of integration, it will showcase good practice in integrating wider scientific data or archaeological evidence to disentangle issues of equifinality. We invite studies that combine novel data sources and those that use multiple isotope/biomolecular proxies in combination. We would also welcome discursive submissions that reflect on the development of integrative approaches and consider future directions. Papers that highlight failures and offer lessons learned are especially welcome.

[335] General Session · EXPERIMENTAL ARCHAEOLOGY, ATTRIBUTE ANALYSIS, AND LITHIC TECHNOLOGY: NEW PERSPECTIVES ON SITE FUNCTION, EXCHANGE, AND SOCIAL RELATIONS**[336] Forum · THE ARCHAEOLOGICAL POWER OF GEOARCHAEOLOGY: WHERE IS IT GOING IN THE UNITED STATES?**

(SPONSORED BY GEOARCHAEOLOGY INTEREST GROUP)

Need a site probability model? Dealing with complicated site stratigraphy? Could your research questions be addressed by microanalytical studies of soils or materials? All archaeologists likely understand that well-trained geoarchaeologists have the specialized "toolkit" to tackle archaeological issues such as these and others—but did you know that US geoarchaeology is at a generational crossroads? Well-trained geoarchaeologists are in high demand, especially in CRM, but there is a shortage of qualified professionals due to retirements and limited comprehensive training opportunities in both academia and CRM. Undoubtedly, this is leading to geoarchaeology not being applied to its fullest potential. This forum brings together geoarchaeologists to discuss the current state of the field and identify ways to advance and further integrate geoarchaeology into all future archaeological projects. The goal is to begin drafting a strategic plan for US geoarchaeology that will be finalized at the following meeting in 2025.

[337] General Session · ADVANCES IN ARCHAEOLOGICAL LAB METHODS AND MODELS

Individual Abstracts of the 2024 SAA 89th Annual Meeting, New Orleans, Louisiana

The ANNUAL MEETING of the Society for American Archaeology provides a forum for the dissemination of knowledge and discussion. The views expressed at the sessions are solely those of the speakers and the Society does not endorse, approve, or censor them. Descriptions of events and titles are those of the organizers, not the Society.

Participants—Individual Abstracts

Abad España, Alba [205]

Approaching Identity and Gender Roles through the Alimentation Sphere in the Iberian Culture (Fifth–First Century BC)
The alimentation sphere presents a relevant context for the examination of sociopolitical dynamics within heterarchical agricultural societies of the Iberian Culture. Historically, alimentation practices have been associated with tasks primarily undertaken by women. However, there is a need to examine whether the extent of the presence of women is related to the degree of control or influence exerted. To what extent did women's leadership in this domain hold political significance and structural value? The necessity of these practices in order to maintain a group is accepted and revalued in social terms, but can we trace it in specific power spheres? In the absence of women's involvement in decision-making with the alimentation operating chain, labor appropriation in terms of work and benefits was happening. The goal of this paper is to investigate these questions through the analysis of three well-established urban settlements located in Eastern Iberia (Alicante, Spain). This study interprets the culinary practices and food preparation methodologies over an expansive chronological spectrum (fifth–first century BC). This examination entails an analysis of culinary pottery and the associated work spaces with the intent of discerning implications on gender, identity, ideology, manifestations of power, and embodiment within these communities.

Abbang, Gregg [105] see Hills, Kendall

Abbe, Ethan [221] see Puente, Nicholas

Abbott, David (Arizona State University) and Christopher Caseldine [310]

Making Sense of the Hohokam Irrigation Anomaly

On a sparse prehistoric landscape where little precipitation fell, Hohokam farmers dug vast canal networks across tens of thousands of acres of xeric desert soils on the banks of the Salt River. Their large-scale hydraulics, without managerial centralization, mark the Hohokam infrastructure as a theoretical anomaly. Cross-culturally, as irrigation scales increase, so must complexity of the political apparatus to manage the expanding hydraulic works. But, not so for the Hohokam. To understand the mismatch between Hohokam scale and complexity, we start with the water. Employing a tree-ring-based reconstruction of Salt River streamflows, we estimated the water supply in each part of the valley each year. Also, we approximated water demand utilizing aerial photographs to measure the acreage served by the canals. Our calculations showed there was an abundance of moisture to meet the needs across the valley and throughout its history. Without the social strife that can boil over under the harsh conditions of chronic water scarcity, the Hohokam irrigation economy avoided the heavy-handed controls that typify other large-scale agriculturalists. For the Hohokam, it was large-scale without complexity.

Abplanalp, Jennifer [270] see Jankiewicz, Stephen

Presentations and posters that were officially withdrawn by March 15, 2024, have been marked as [WITHDRAWN] in the Individual Abstracts; however, these presentation/poster placeholders will still appear in the Final Program. Updated information regarding withdrawals will be provided in Daily Digest email/app updates during the meeting.

Abrams, Georgia (Illinois State Archaeological Survey), Hannah Rucinski (Illinois State Archaeological Survey) and Tamira Brennan (Illinois State Archaeological Survey)
[137]

Moving a Monster, Part Two: Preserving Illinois' Cultural History in Perpetuity

As a result of moving its ~24,000 ft³ Illinois Department of Transportation (IDOT) collections to a more suitable facility, the Illinois State Archaeological Survey's Curation Section is now more capable of addressing the present and future needs of the collections and its users. This paper details the move's success and our ongoing efforts to create more accessible research opportunities by revolutionizing the care of all ISAS-held collections. These efforts include updating the procedural flow from lab processing to transfers and loans, creating and utilizing a comprehensive relational database for material and documents, and stabilizing legacy collections. This work not only facilitates academic research but allows for more successful consultation with our Tribal partners. We intend for our work in moving the IDOT collections to serve as a model for other institutions to move and improve monsters of their own.

Abrams, Georgia [137] see Rucinski, Hannah
Abrams, Georgia [305] see Brennan, Tamira

Abrego, Alejandra [75] see Sanchez Miranda, Guadalupe

Abu Jayyab, Khaled, Natalia Handziuk (University of Toronto), Stephen Rhodes (University of Toronto) and Sean Doyle (Environmental Resources Management)
[294]

Making, Baking, Breaking, and Cutting: Experiential Learning through Enacting the Past

Concepts, such as the *chaîne opératoire* and *communities of practice* are central to material analyses and student training at the Gadachrili Gora Regional Archaeological Project Expedition (GRAPE), Republic of Georgia. Teaching abstract conceptual frameworks to undergraduate students is a challenging task for instructors in the classroom, never mind in the field where students are mentally exhausted after a long day of hard work under the sun. As such, team specialists at GRAPE have incorporated experiential teaching methods to facilitate student understanding of the *chaîne opératoire* and *communities of practice*. Through the enactment of pottery manufacture, obsidian knapping, bone tool production, and sheep carcass butchering, students have been fully able to comprehend these conceptual frameworks and apply them to analyses carried out on recovered archaeological materials from the field. This paper will look at how these experimental methods not only were a good way to build competence among students but also a deeper nuanced understanding of the entanglements attested across the various crafts and the spatiotemporal demands required in past crafting activities.

Aceituno, Francisco Javier [36] see Osborn, Jo
Aceituno, Francisco Javier [217] see Garay-Vazquez, J. Julian

Acero-Shapiama, Erick (Programa de Investigación Arqueológica y Conservación Chavín de Huántar), John Rick (Stanford University), Rosa Rick (Programa de Investigación Arqueológica y Conservación Chavín de Huántar) and Lisseth Rojas-Pelayo (Programa de Investigación Arqueológica y Conservación Chavín de Huántar)
[27]

Descifrando las transformaciones y significados en Chavín de Huántar: Un análisis de los marcadores materiales en la Plaza Circular y el atrio

A través del tiempo, la Plaza Circular y su atrio en el monumento Chavín de Huántar han tenido mucha importancia. Durante la fase Blanco-Negro, estas áreas, tuvieron pleno funcionamiento y albergaron una

diversidad de contextos, donde destaca el descubrimiento de las galerías de la serie Caracolas y parte del canal Rocas (temprano y tardío), evidenciándose así transformaciones y continuas ocupaciones. Aunque conocemos la historia general del templo, aún nos enfrentamos en entender ¿Cuáles son los marcadores que permiten reconocer las innovaciones? y ¿Qué conllevó al ordenamiento de las transformaciones contextuales? Para abordar ello, exploramos el marco teórico de la memoria y agencia, conceptos ligados a la materialidad, donde cada elemento es producto de una acción que modifica la realidad; la cual, se conecta a una historia. Ambos enfoques buscan adentrarnos en el pensamiento detrás de las actividades hechas por las innovaciones y los contextos, la cual denota la complejidad de la ideología del Formativo Medio y Tardío. Por eso, presentamos los marcadores trans-temporales como evidencias físicas materiales, que además reflejan el ordenamiento y comportamiento de las innovaciones y contextos (iconográficos y ofrendatorios); ideas que fueron fundamentales y dieron pase al cúmulo de transformaciones en Chavín.

Acero-Shapiama, Erick [27] see Rick, John
Acero-Shapiama, Erick [27] see Sayre, Matthew

Acosta Ochoa, Guillermo [214] see Jiménez González, Berenice

Acuña, Paulina [158] see Lira, Nicolas

Acuña Lugo, Martin [77] see Espinosa, Silvana

**Adam, Manda and Fred Valdez Jr. (University of Texas, Austin)
[276]**

A Postclassic Maya Midden at Colha, Belize

The Ancient Maya Postclassic period (1000–1500 CE) is one of the least understood periods of Ancient Maya cultural history. Essential questions about the Postclassic remained unanswered due to a focus on the preceding period the Classic Maya Collapse (800–1000 CE). While the collapse is well studied and understood, what happens after the collapse is not. Following the collapse many sites in the central Maya Lowlands are abandoned, never to be reoccupied again, except for a few exceptions. The site of Colha, located in northwestern Belize, is one of these exceptions, the site was abandoned in the Terminal Classic but reoccupied during the Postclassic. Excavations in the summer of 2023 at the site of Colha uncovered a Postclassic midden deposit. Data from these excavations will be presented to answer essential questions about the Postclassic and illuminate cultural transformations in the Postclassic, the daily life of the Postclassic Maya of Colha, and Colha's interactions with other sites.

**Adams, Emily Claire (Harvard University)
[22]**

Villa, Monastery, or Vicus? The Archaeology of Monasteries and Productive Centers across the West ca. 400–1000

This paper investigates the emerging questions surrounding the interpretation of archaeologically attested communities which blur the lines between religious, familial, and independent productive centers in the early medieval West. Recent scholarship has begun to appreciate the interrelationship between cult sites and economically productive centers in the premodern period. Such blurred distinctions create problems for interpreting archaeological sites and classifying them into textually created typologies. Nowhere is this more problematic than in the study of monasteries and cult sites in the early medieval period. Newly excavated settlements such as Little Carleton (UK) or Communaux (FR) challenge traditional artifact assemblages and features associated with either monastic communities or secular productive sites. Through analysis of archaeologically attested participation in production at monasteries, this paper seeks to situate early medieval monastic sites within the larger early medieval economy.

Adams, Karen**[149]***Discussant***Adams, Ron (Willamette Cultural Resources Associates)****[271]***Stone Monumentality in Tana Toraja, Indonesia: Initial Ethnoarchaeological Insights*

Stone remains a prominent feature of the natural and cultural landscape of Tana Toraja, Indonesia, where outcropping basalt and limestone karst formations create a dramatic backdrop. In this context, the manipulation of stone is an important aspect of ancient cultural traditions that persist to the present day, but which has received relatively little attention in past ethnographic and ethnoarchaeological documentation in Tana Toraja. The construction of menhirs is part of this stone-working tradition that also includes rock-cut tombs and placement of smaller freestanding stone monuments. Menhirs are quarried, transported, and erected on the occasions of elaborate funerary traditions in Tana Toraja, which can entail complex ritual practices and staggering expenses. This paper offers the results of a preliminary ethnoarchaeological documentation of Torajan menhirs and the methods, logistics, and social dynamics associated with this megalithic tradition. Quarrying and erecting menhirs requires specialized stone workers and can entail a large labor force to transport. Over time, the monuments become enduring memorials of the deceased and associated funerary traditions in a context with an otherwise perishable traditional built environment.

Adams, Sophia [42] see Hamilton, Derek

Adán, Leonor [77] see Urbina, Simón

Adán, Leonor [178] see Sierralta Navarro, Simón

Adeyemo, Elizabeth (University of Notre Dame)**[250]***Engaging Materiality: Archaeology of Craft Production in Igbo Ukwu (Ninth–Twelfth Century CE)*

This paper adopts an interdisciplinary approach to the study of craft production in antiquity. It combines theoretical and methodological toolkits from archaeology, material science, studies of craft production, and ancient economies to investigate the organization of the Igbo Ukwu pottery industry (ninth–twelfth century CE). Igbo Ukwu is situated in present day Anambra State, southeastern Nigeria. The storied material corpus from Igbo Ukwu recovered from two excavation seasons between 1959 and 1960 include about 75 kg of copper objects, 21,000 ceramics, 165,000 glass beads, some textiles, stones, and other organic items. This project focuses on the study of the ceramic materials from this legacy excavation. It explores the materiality of the ceramic assemblage as markers to investigate the socioeconomic structures of the ancient Igbo Ukwu polity. It examines how technological choices are embedded in the pottery products that are then distributed and deposited in varying contexts of usage in the archaeological record. Findings from this project puts into conversation fundamental discourses on the interaction between crafts production and socioeconomics in ancient societies. It advances models of integration of craft production into studies of ancient economies as means to further understanding of the mosaic nature of sociopolitical and economic structures in antiquity.

Adler, Michael (Southern Methodist University)**[84]***Classic Picuris: Reassessing the Discoveries of Herbert Dick's Early Excavations*

In 1961, in collaboration with the Picuris Pueblo tribal nation, Dr. Herb Dick initiated a multidisciplinary research project that documented architecture, agrarian strategies, sacred landscapes, ethnohistory,

ethnobotany, avifauna, and other lines of evidence to better understand the past millennium of Picuris's history. This research resulted in the most extensively excavations of any presently occupied pueblo community, generated collections of millions of artifacts, and broadened our understandings of northern Rio Grande history and prehistory. The past 60 years these understandings have gone underpublished and, hence, underappreciated. This paper highlights the amazing accomplishments of the earlier work accomplished in concert with the people of Picuris Pueblo. It also emphasizes the intensely collaborative, and sometimes combative, nature of this early example of multidisciplinary research in living Indigenous communities.

Adler, Michael [84] see Casana, Jesse
Adler, Michael [84] see Fowles, Severin

Adlington, Laura [170] see Sefton, Jahleen

Adovasio, J. M. (Senator John Heinz History Center)

[262]

Mea Culpa

As I have done no comparative study on the subject, I assume that it is relatively unusual to amend one's dissertation research let alone to point out its flaws. Nevertheless, this is precisely what I am doing in this presentation. While the salient points of my dissertation ("The Origin, Development, and Distributions of Western Archaic Textiles," 1970) remain unchanged, it is clear that I was dead wrong on a number of issues. Clarification of these issues is the focal point of this paper. I was wrong about the dating of the earliest perishable industries in the world and also mistaken about the antiquity of decorated basketry. I still maintain, however, that basketry and its sister crafts have a unique ability to illumine the past.

Adriano-Morán, Carmen Cristina [152] see McClung de Tapia, Emily

Agbe-Davies, Anna (UNC-Chapel Hill)

[82]

Discussant

Agbe-Davies, Anna (UNC-Chapel Hill)

[258]

Heritage in Action at the Pauli Murray Center

Rather than argue that heritage does things, this paper explores what might happen when archaeologists (to borrow a phrase from J L Austin) "do things with heritage." Specifically, I use the points raised by Patricia Hill Collins in her weaving together of pragmatics and intersectionality to frame a discussion of archaeology and heritage at the childhood home of human rights activist Pauli Murray.

Agha, Andrew

[312]

Using Archaeobotany and Historical Archaeology to Identify the Influence of Early English Science on Southeastern Plantation Development

The First Earl of Shaftesbury (1621–1683) was the prime motivator and mastermind behind the settlement and success of the English colony Carolina in 1670. John Locke, Secretary to the Lords Proprietors of Carolina, was also Shaftesbury's friend and colleague in many affairs, one being their Fellowship in the Royal Society of London. The uniquely English concept of "Improvement" was the foundation for both the Royal Society and early English science as they developed in the 1660s. When Locke wrote his "labor theory of property" he utilized Improvement as a basis for private property. I argue that when Shaftesbury planned and

launched his 12,000-acre Carolinian estate in 1674, he did so to ground-truth Locke's property theory by anchoring it to a scientifically experimental agricultural regime to improve land into property through modernized enslaved labor—a process that turned the enslaved into scientific technicians. I use Historical Political Ecology and Landscape Archaeology to pair the archaeobotanical record with artifacts from Shaftesbury's estate to identify elements of English Improvement and Royal Society influences that point out how the enslaved Africans at Shaftesbury's estate were coerced into converting English colonial estates into Carolina's first true plantations—plantations based on monocrop surplus agriculture and slavery.

Aghagholizadeh, Mehrdad [18] see McCoy, Mark

Aguayo Haro, Ramiro (Instituto Nacional de Antropología e Historia) and Mijaely Castañón-Suárez (COLMICH)

[290]

Trabajo arqueológico desde la bodega: Una revisión de los objetos funerarios asociados a las tumbas de La Nopalera
A partir de un nuevo análisis de los ajueres funerarios excavados en la década de los ochenta en el sitio de La Nopalera, se lleva a cabo un replanteamiento tanto de la temporalidad como los alcances sociales de este tipo de contextos funerarios en la región de la cuenca de Cuitzeo. Se deja de lado la idea incipiente en el que los procesos sociales que dieron origen a este tipo de manifestaciones culturales son resultado del proceso de expansión militarista del Postclásico, integrarlos en una serie de manifestaciones de mayor relevancia durante el periodo Clásico.

Aguilar Martinez, Guillermo [114] see Campos Martinez, Miriam

Aguilar-Meléndez, Araceli [217] see Chiou, Katherine

Aguilar-Moreno, Manuel (California State University, Los Angeles)

[252]

The Acolman Cross and the Maize God

The monastery of Acolman founded by the Augustinian order is located near Teotihuacan. The most astonishing *tequitqui* (Amerindian-Christian art of the sixteenth century) monument in Acolman is the atrial cross made in 1550. Although open-air crosses existed in Europe, the Mexican crosses have a different iconography and function. The atrial cross of Acolman, provides a dual system of religious meanings: Christian and Indigenous. The cross is the central symbol of Christianity and represents the death and resurrection of Christ. Likewise, the Christian cross at the center of the atrio was understood by the Indians as another representation of the World Tree, the Axis Mundi that connected the gods of the Upperworld and Underworld with the human beings on the surface of the earth. The Indigenous cosmogram was completed with the four *posa* chapels representing the four corners of the world and the side walls of the atrio oriented to the four directions of the Universe. I will compare the Acolman cross with the Maya tablet of the Foliated Cross of Palenque to establish the convergence and relative equivalence of the two visions of the world. Based in those Amerindian-Christian concepts, I will propose an interpretation of the Acolman Cross.

Aguilar Tapia, Rodolfo [218] see Matadamas-Gomora, Diego

Aguilera, Nelson [158] see Garcia-Piquer, Albert

Aguirre, Alejandra (Proyecto Templo Mayor/UNAM)**[79]***The Sacrificial Artifacts in the Templo Mayor Offerings*

The complex Mesoamerican cosmovision includes myths about the cultures to try to understand, their history, natural events, and their universe, through narrations and fantastic facts, which gave them an explanation about everything that they did not understand. As a consequence of this, the invention of ritual acts that everyone had to participate in, because thanks to the rituals, they stayed alive and obtained the favor of the deities. Rituals were a means of understanding the cognitive systems of Mesoamerican societies. The diversity of existing ritual acts, sacrifice, and autosacrifice served as a means to obtain the precious blood to offer the gods. To offer blood was a commonly a ritual practice in the religious festivities of Mexica society; thus, it became part of everyday life. The practice of these rituals is visible in the Templo Mayor offerings. Abundant evidence has been found of the sacrificial and autosacrificial paraphernalia like knives, bone awls, and maguey thorns.

Agus Oktaviana, Adhi [288] see Dilkes-Hall, India Ella

Ahedo, Virginia [119] see Zurro, Debora

Ahedo, Virginia [198] see Torras Freixa, Maria

Ahern, James (University of Wyoming), Rory Becker (Eastern Oregon University), Ivor Jankovic (Institute for Anthropological Research, Zagreb) and Lia Vidas (Institute for Anthropological Research, Zagreb)**[247]***Digital Imaging and Geophysical Prospection Techniques at Paleolithic Cave and Rockshelter Sites in Croatia*

Conducting archaeological investigations in cave and rockshelters presents researchers with multiple unique challenges as compared to typical open-air sites. Reduced space, low light, and complex stratigraphic sequences are frequently the norm. Additionally, the nature of limestone cave walls and floors is an undulating, irregular surface that creates many pockets, troughs, and ridges where sediment may accumulate unevenly beneath a relatively level surface. This creates a problem for the research team to select productive locations for excavations within time constraints for the project and within the limited space available. The application of electrical resistance tomography (ERT) to model sediment depths has been utilized at five sites in Croatia to seek a means of addressing this issue. Conversely, the smaller spaces in caves and rockshelters present an opportunity for high density image collection of the surface features and excavation in process that may, at times, include the entire site. Photogrammetry and hand-held lidar have been used for localized spatial data collection at many of the same sites where ERT was employed. This paper presents the methodologies associated with each approach and details their potential benefits or weaknesses as applied to Paleolithic cave and rockshelter sites in south central Europe.

Ahern, Kaitlin (University at Buffalo; New South Associates Inc.)**[32]***Plazas and Proxemics: Preclassic and Classic Period Plazas at the Maya Centers of Cival and Holmul*

This presentation focuses on examining Preclassic and Classic period plazas at Cival and Holmul in Guatemala to provide greater insight into the role of public spaces and ceremonies in the Central Maya Lowlands. Estimated plaza capacity and population estimates are used to determine how plazas were utilized at both Cival and Holmul, for functions such as mass-spectacle events, and how these uses changed over time. Previous evidence of ritual events found in these plazas, including caches and stelae, are incorporated to help determine the range of activities conducted in these spaces.

Ahlman, Todd (Texas State University) and Ashley McKeown (Texas State University)
[267]

Post-emancipation Ceramics and Housing in the British Caribbean: A Case Study from St. Kitts' Southeast Peninsula
 Emancipation brought many changes to the lives of the formerly enslaved in the British Caribbean. On the British Caribbean island of St. Christopher (St. Kitts), true emancipation came in 1838 following a four-year apprenticeship period, which was really enslavement in just another name. Freedom meant Kittitians often could choose where they lived, the house they lived in, and the items they purchased with the money they earned for their labors. This study compares the pre- and post-emancipation housing and ceramic assemblages from two households in a plantation village on St. Kitts' southeast peninsula to understand how people adapted to freedom in the post emancipation period. We find that there are differences in housing and ceramic acquisition and discard between the two households that reflect different investment strategies and agency.

Ahlich, Robert (Commonwealth Heritage Group Paleowest)
[228]

Cultural Corridors in South Central Pennsylvania

A recent cultural resource management project located in south central Pennsylvania's Path Valley identified a series of five sites oriented around one of the waterways forming the headwaters of the Potomac River Drainage. Background research and local informants indicate that a network of small- to medium-sized precontact sites can be found along the streams leading south, ultimately to the Potomac River. Data from these extreme upper Potomac Drainage sites are well positioned to test Herbstritt's (2015) "Cultural Corridor" hypotheses regarding the nature interactions between Susquehanna oriented societies and those centered in the Potomac River basin.

Ahlstrom, Richard (HRA Inc. Conservation Archaeology)
[60]

Ladders, Axes, and Pithouses: Elements of a Seventh-Century Pueblo Technological Complex

Earliest evidence for the widespread use of two-pole ladders and hafted stone axes in the American Southwest's Central Pueblo area tree-ring dates to the seventh century. That evidence includes, for ladders, remains of the objects themselves, but especially ladder rests found in pithouse floors and, for axes, stone tool heads and stone-axe-cut beams. These innovations were linked, technologically, because each implement relied on bindings subjected to heavy, abruptly applied loads and, historically, because both were adopted in concert with transitions in pithouse architecture. The stone axe facilitated procurement and use of stronger, more numerous, more often newly procured (vs. reused), and increasingly standardized beams, posts, and poles in pithouse superstructures—presumably to extend structure use-lives, but also to accommodate a shift from side-wall to roof-hatch entries. Changes in beam use would have enhanced pithouses' "tree-ring-datability," helping to explain a jump in dated structures from the 500s to 600s. Two-pole ladders would have facilitated use of roof hatches. Stone axes and two-pole ladders were elements—along with pithouse antechambers and improved ceramic and possibly bean-farming technologies—of a demographically expansive Basketmaker III life-way, borne by Pueblo communities whose seventh-century colonization of the Mesa Verde region contributed to the post-600 increase in dated pithouses.

Aimers, Jim (SUNY Geneseo), Debra Walker (Florida Museum of Natural History) and Lisa LeCount (University of Alabama)
[251]

Insights from the Classic to Postclassic Pottery of Belize

For many years, Belize was considered to be peripheral to major social and cultural dynamics in the ancient Maya world. Recent pottery analyses in Belize, however, document that Classic and Postclassic Belize experienced some significant regional changes that inform our current interpretations. In this paper, we

explore this more nuanced view at various developmental junctures that add to our overall understanding of Maya communities, particularly during transitional times. For example, we consider when the Classic period began and what role Belize sites played in Early Classic Maya society. While the Late Classic period is perhaps the best understood, we discuss variability in Belizean complexes that speak to regional political alliances and trade networks that distributed types across the region. Similarly, Belize is pivotal to understanding the Terminal Classic Maya world, and the region's demographic shift to riverine and coastal settlement. Finally, we think the patchy and ambiguous nature of Early Postclassic settlements reflects the real turmoil facing communities as they reinvented themselves.

Aimers, Jim [21] see Moore, Tamara

Airola, Danielle

[98]

Anthropology on Social Media

In 2018, only about half of Americans (49%) agreed that “human beings, as we know them today, developed from earlier species of animals,” and 38% that “the universe began with a big explosion” (Besley and Hill, 2020). These basic facts may be well understood by the scientific and academic communities, but how do we go about disseminating this sort of knowledge to the general public? What about more nuanced and detailed information that may affect people's understanding of our human heritage or health? Social media has great potential for increasing the reach and broadening the understanding of individuals. However, it must be done effectively and be mindful of the platform's methods. This poster asks a question: how can we use social media to talk about anthropology and archaeology? We will explore different social media platforms and how to use them. Platforms covered will include Instagram, YouTube, Facebook, and TikTok. It will also discuss best practices on social media and include examples of academia and scholarship on social media and hashtags to use. The content of this poster is intended to serve as a starting point for those interested in using social media as a form of public outreach.

Airola, Danielle [80] see Gembicki, Maciej

Aitchison, Kenneth (Landward Research; University of Liverpool)

[63]

Moderator

[196]

Discussant

Aitchison, Kenneth (Landward Research; University of Liverpool), Keith May (Historic England; University of South Wales), James Taylor (University of York) and Doug Rocks-Macqueen (Landward Research)

[141]

The Archaeologist's Guide to Good Practice: A Handbook for Post-excavation Analysis of Stratigraphic and Chronological Data

Recent work on The Matrix project (AH/T002093/1) identified a number of issues with the way archaeological information is deposited in digital archives. There are noticeable differences in the completeness of data that get digitally archived from archaeological fieldwork undertaken by different organizations in the UK. This is particularly evident in the quantities and reusability of data deposited as the result of commercially funded work as opposed to academic investigations (e.g., university or national agency funded). A follow-up project, funded by the Arts and Humanities Research Council (AG2GP-Handbook), is creating a good practice guide for use in development-led archaeology (CRM). By drawing together the collective expertise of the main commercial contractors that undertake archaeological fieldwork as part of the development control process in the UK and, in consultation with other stakeholders, we have taken a consortium approach to distill, document, and support best working practice and develop online resources

for archaeological post-excavation analysis. This has established an open-source access handbook that sets out a cross-sectoral set of common procedures that reflect and enshrine best practice in post-excavation analysis work of stratigraphic and chronological data.

Aiuvalasit, Michael (Illinois State Archaeological Survey, University of Illinois)

[336]

Moderator

Akerraz, Aomar [95] see Jazwa, Christopher

Akey, Ben [283] see Camp, Stacey

Alaica, Aleksa (University of British Columbia)

[234]

Discussant

[30]

Chair

Alaica, Aleksa (University of British Columbia) and Luis Manuel Gonzalez-La Rosa (Archaeology Centre, University of Toronto)

[30]

Feeding the Body and Mind: Artistic Genesis through Blurring Species Boundaries

Moche artistic representations are known for their composite images of plants, animals, humans, and supernatural forms. The genesis of this artistic tradition rests in the beliefs about the relations between species, environments, and worlds. Food acquisition, preparation, and communal consumption composed potent sets of practices that permitted these connections to be realized and species boundaries to be blurred. Evidence from Huaca Colorada, a Late Moche site, enables this exploration of Moche artistic genesis. Various examples of cooking and storage vessels with the remains of marine, terrestrial, and avian species have been uncovered in direct relation to human offerings. These individuals were of different ages, sex, and stages in their lives and the motivation for their association to these vessels appears to rest in their affiliation with distinct communities of practice. In this paper, we argue that the ritual deposits of storage and cooking vessels filled with a multitude of species both consumed and symbolically interred along with human offerings were powerful acts of gathering that simultaneously manifested in the forms of human and nonhuman beings blurred together in Moche material culture.

Alaica, Aleksa [76] see Berquist, Stephen

Alaica, Aleksa [30] see Duke, Guy

Alaica, Aleksa [30] see Gonzalez-La Rosa, Luis Manuel

Alaica, Aleksa [215] see Leishman, Kendra

Alaica, Aleksa [268] see Ren, Kara

Alapisco, Dawn Marie

[39]

Discussant

Alarcón Ledesma, Carmela [158] see Luján Dávila, Milton

Albert, Rosa Maria [93] see Alonso Eguiluz, Monica

Alcaraz-Castaño, Manuel (University of Alcalá), José-Javier Alcolea (University of Alcalá), Luis Luque (University of Alcalá), Samuel Castillo-Jiménez (University of Alcalá) and Felipe Cuartero (Spanish National Research Center for Human Evolution)
[126]

Expedient Lithic Technology at the Terminal Gravettian of the Peña Capón Site (Central Spain) during Heinrich Stadial 2

The Terminal Gravettian, first defined in Central Portugal, is a relative outlier concerning the exploitation of lithic raw materials during the Upper Paleolithic of southwest Europe, as especially shown by an intensive use of quartz. Although Terminal Gravettian assemblages often include the production of bladelets, usually made in rock crystal, most of their components suggest expedient technologies, as they show low technological investment, low typological standardization, and a preference for local rocks. However, the specific meaning of these low-cost techno-economic behaviors, and their relation to the function and duration of occupations, patterns of human-environment interactions, and cultural choices, remains unclear. We discuss the case of the Terminal Gravettian layers recently identified at the Peña Capón site (central Spain), coincident with Heinrich Stadial 2 and located in an area that was traditionally thought to be depopulated during the coldest stages of the Last Glacial. These layers show a relatively low density of artifacts, the presence of small fireplaces, and a faunal collection dominated by a single species (horse) thus suggesting short-term occupations. Therefore, the expedient technologies of the Terminal Gravettian at Peña Capón seem related to specific needs arising during short stays at the site, possibly related to game processing activities.

Alcaraz-Castaño, Manuel [162] see Sánchez De La Torre, Marta

Alcock, Susan (University of Oklahoma)
[26]

Watching Me, Watching You, Watching Me: Greek Helots and Their Masters

Ancient classical sources tell us that in the late eighth/seventh centuries BCE the armies of Sparta marched on their neighbors to the west, the Messenians, and conquered their wide and fertile lands. Many Messenians fled, but others remained to become the famed “helots” of the Greek world—a population subject to Sparta in a status deemed “between free men and slaves.” Unsuccessful revolts periodically disrupted the regime, but for some three centuries Spartan citizens controlled, but feared, their helots; Messenian helots feared, but labored for, their masters. This paper considers the strategies of surveillance—from both sides—that governed this fraught relationship. Sparta maintained control of its subject population through a variety of punitive measures, including the Krypteia: a curious Spartan institution sometimes referred to as a roving “secret police.” Helot reconnaissance is considerably more difficult to investigate, but recent archaeological evidence points to active internal Messenian communication networks. The agencies and methods behind such mutual “watching” require additional scrutiny, using both archaeological and textual evidence, an analysis that will be contextualized and informed by studies of surveillance of enslaved or resistant populations in other periods and places, especially populations in wider regional settings.

Alcolea, Guillem [179] see Forste, Kathleen

Alcolea, José-Javier [126] see Alcaraz-Castaño, Manuel

Alconini, Sonia (University of Virginia)
[146]

Discussant

Alconini, Sonia (University of Virginia)

[242]

Water and Hydraulic Technology in the Eastern Andean Mountains: The Amarete Valley

The Puna Apolobamba pastures played a critical role in farming, pastoralism, and agropastoralism in the Kallawaya territory. Located to the east of the Titicaca basin, the area was dotted by sunken fields, bofedales, and water *qocha* reservoirs supplemented with canals. In this presentation, I discuss the nature and distribution of *tajanas*, a set of interconnected stone water receptacles and canals constructed to collect and distribute water to the system of farming terraces in the Amarete Valley. I also discuss the antiquity and variability of *tajanas* and similar water-collecting technologies and the role that they played, and still play, in the rise and expansion of farming terraces in the eastern Andes.

Aldana Mendoza, Jesús Alberto (NGO Colombia Anfibia), Carlos Del Cairo Hurtado (NGO Colombia Anfibia), Carla Riera Andreu (NGO Colombia Anfibia) and Laura Báez Santos (NGO Colombia Anfibia)

[158]

The Defensive Conformation of the Maritime Space in the Bay of Cartagena de Indias (Colombia) during the Eighteenth Century

Cartagena de Indias' geostrategic importance for the European colonial powers in the eighteenth century led to the creation of defense infrastructures and the development of practices to strengthen and protect the coastal territory. All the infrastructures and cultural practices inherent to the "militarization" of this territory constitute today a homogeneous cultural phenomenon interpreted as a Maritime Cultural Landscape of War and Defense, or as a Fortified Landscape. The experiences of the continuous attacks, like the English siege in 1741, contributed to the revision and evolution of the strategies and tactics of defense in the Bay of Cartagena de Indias and the improvement of the military devices for nautical control. The defense system's constitution, the war events, and the battles' results left archaeological evidence located on land, on the coast, and underwater. In this sense, the main goal of this paper is to expose the defensive conformation of the maritime space in the Bay of Cartagena de Indias (Colombia) during the eighteenth century. This, through the discussion of the archaeological investigations carried out in the different inland, intertidal, and submerged contexts of the region.

Alday, Camila

[217]

Circa 12,000-Year-Old Fiber Technologies in the Atacama Desert

Plants have been used for making fabrics for thousands of years (Hardy 2007; Hardy et al. 2020; Hurcombe 2008; Kvavadze et al. 2009, Nadel et al. 1994), and many species have been gathered and eventually cultivated for this purpose (Barber 1992; Gleba and Harris 2019; Rast-Eicher et al. 2021). Evidence of bast fiber artifacts suggests that the development of these sophisticated technologies was critical to different dimensions of past lifestyles. In this paper I present the oldest evidence of plant technologies from two open-air Pleistocene sites: Quebrada Mani 32 (12,240–11,465 cal yr BP) and Pampa Ramaditas 5 (12,140–12,225 cal yr BP) located in the Quebrada Mani drainage in the Pampa del Tamarugal, northern Chile. Through archaeobotanical and structural analysis, bast fibers of Cyperaceae and Apocynaceae family plants have been found being worked into spliced threads representing early plant fiber technologies in the south-central Andes region. These organic technologies offer an opportunity for a yet unexplored research avenue regarding early weaving technologies and the use of plants among Pleistocene hunter-gatherer groups in South America. Finally, we suggest that perishables industries played a critical role in the adaptive strategies of the late Pleistocene hunter-gatherers of the Atacama Desert.

Aldeias, Vera [119] see Simões, Carlos

Aldenderfer, Mark [306] see Flores-Blanco, Luis

Aldenderfer, Mark [42] see Iizuka, Fumie

Aldenderfer, Mark [249] see Noe, Sarah

Alders, Wolfgang (University of Arkansas, Fayetteville)

[245]

Modeling Socioecological Transformation in Coastal East Africa: A Case Study from Unguja Island, Zanzibar, Tanzania
Archaeologists in the Pacific have viewed islands as “laboratories” for studying social, agricultural, and ecological transformations. Can a similar approach be applied to the near-shore island environments of coastal East Africa, and what might island case studies contribute to broader anthropological understandings of East African social complexity and human-environment interactions? This paper considers these dynamics on Unguja Island in Zanzibar, Tanzania, sixth to nineteenth centuries CE. Combining two seasons of systematic survey data with a synthesis of previous research, I outline four phases of transformation: (1) the initial colonization of the island’s coast by fishing, farming, and iron-working proto-Swahili people (sixth–tenth centuries CE), (2) settlement diversification across variable environments alongside the emergence of a class of social elites (eleventh–fifteenth centuries CE), (3) an orientation toward territoriality, monumentality, and seclusion during the early colonial period (sixteenth–eighteenth centuries CE), and (4) large-scale agricultural intensification during the late colonial era (nineteenth–twentieth centuries CE) as the island’s landscapes were transformed for cash crop production. This study demonstrates how the autonomous and integrative activities of rural commoners shaped socioecological systems at different junctures. Furthermore, modeling the island’s settlement trajectory informs an understanding of broader trends in the Indian Ocean and on the African continent.

Alders, Wolfgang [55] see Dumitru, Ioana

Aldrich, Stephen [43] see Sindors, Elizabeth

Alegria, Maximillion (University of Florida)

[53]

Chair

Alegria, Maximillion (University of Florida) and Gabriel Prieto (University of Florida)

[53]

Conceptualizing the Cloth of the Consecrated Child: Textiles Associated with Chimú Mass Sacrifice in Huanchaco, North Coast of Peru

This study discusses broader questions surrounding the textile remains uncovered with the victims of the largest series of mass child sacrificial events on the North Coast of ancient Peru. Recent investigations are helping to understand Chimú (approx. AD 1000–1450/1470) sacrificial practices and the ideologies fueling their performance. In contrast, little has been done to contextualize sacrificial garments within the overarching pantheon of Chimú weaving. To correct these breaks in scholarly thought, I have conducted in-depth visual analyses of 12 textiles uncovered with the child sacrificial victims buried at Pampa la Cruz, Huanchaco in July of 2022. The findings of these analyses allow me to extrapolate information revolving around the weavers who created these textiles and their conceptualization of the sacrificial child within Chimú society. Including the recent observations of more Pampa la Cruz textiles curated by the Universidad Nacional de Trujillo which sheds light on the burial program employed in these contexts, and points toward various new avenues of study. As a result, I propose three scenarios that could explain the role played by these textiles and how they could help to investigate the identity (as a sacrificial being) of the children buried atop Pampa la Cruz.

Alexander, Clara [159] see Tokovinine, Alexandre

Alexander, Jesse [268] see Kellner, Corina

Alexander, Michelle [22] see Pluskowski, Aleks

Alexander, Rani (New Mexico State University)

[83]

Discussant

[83]

Chair

Alexandrino Ocaña, Grace (Stanford University)

[243]

Chair

Alexandrino Ocaña, Grace (Stanford University) and Carla Márquez Abad (University College London)

[243]

Reflexiones, posibilidades y desafíos de la arqueología colaborativa en el Perú

¿Es posible hacer arqueología colaborativa en Perú? De serlo, ¿Cuáles son las características locales de esta práctica? Debido a movimientos sociales de reivindicación de los derechos de comunidades descendientes, desde la década de 1990 la arqueología colaborativa es tendencia en el mundo anglosajón. Regulaciones y leyes impulsaron el pasó de una aproximación centrada en la educación patrimonial al desarrollo de proyectos de investigación y de gestión del patrimonio donde las voces de comunidades no especialistas son determinantes. Considerando la realidad social peruana, es relevante preguntarnos si podemos hablar de una arqueología colaborativa y qué significa para las y los investigadores, y para las comunidades con las que trabajan. En esta presentación reflexionaremos sobre qué entendemos por arqueología colaborativa en Perú, las estrategias que se han desarrollado para integrar a diversos ciudadanos en las investigaciones arqueológicas y sobre el potencial y limitantes que tiene esta manera de hacer arqueología en Perú. Debido a que existen pocos grupos autoidentificados y reconocidos legalmente como descendientes, comunidades originarias o indígenas, este escenario y el hecho de que en su mayoría son comunidades desprovistas de servicios por el Estado, determina la manera en que incluimos a las comunidades en nuestra práctica arqueológica.

Alfonso-Durruty, Marta [9] see Morello Repetto, Flavia

Alford, McKenzie (Southern Methodist University) and Douglas Mitchell (S'edav Va'aki Museum)

[69]

Old Data, New Format: Digitizing to Increase the Accessibility of Mortuary Information at S'edav Va'aki, Phoenix, Arizona

Digital databases are critical to archaeological data management, but our increasing use of them since the 1980s means that some of them have become artifacts in themselves. Cultural resource management (CRM) firms in particular rely on different databases to document mortuary features and associated funerary objects, but as many CRM collections have already been repatriated to descendant communities, the field notes, field

maps, osteological drawings, artifact recordings, and databases from the excavations are all that remain. This poster uses the large Classic period Hohokam site of S'edav Va'aki (formerly Pueblo Grande) in Phoenix, Arizona, to show how mortuary feature information previously stored in outdated technology may be converted into an accessible online platform. While some field and osteological notes had already been digitized, many still existed only in physical form. This poster presents a methodology to digitize and compile the data from each of the recovered ancestral remains at S'edav Va'aki and organize them into a searchable database to better compare mortuary features within and beyond the site to help us better understand Hohokam society.

Alix, Claire (CNRS UMR8096 / Univ. Paris I Pantheon Sorbonne)

[307]

Conceptualizing the Study of Wood Remains in Arctic Sites: A 20-Year Short Review and a Case Study

Analyses of wood remains and artifact assemblages, while remaining few, are nevertheless developing in many areas of the American Arctic and the North Atlantic, providing a rich, diverse database for site or regional comparisons. At the same time, research on changing driftwood circulation and provenance over time has made a comeback in recent years. The results of this work are helpful to archaeologists as they examine the contribution of human and environmental factors in the complex cycle of wood production, circulation, distribution, and use. Despite such tremendous progress, the importance of wood in past Arctic societies and the high quality of preserved wood remains, Arctic archaeologists still do not make wood sampling and analyses a priority, in the same way as they would for other, more traditionally studied remains. Moreover, there is a surprising lack of understanding of what dendrochronology, even on driftwood, can contribute to understanding archaeological sites when properly sampled and documented. In this paper, I describe the sampling strategy and recording of architectural, artifact, and other wood material remains implemented at the Rising Whale site in northwestern Alaska during the Cape Espenberg Birnirk project and how analysis of these remains improves understanding of site occupation and chronology.

Alix, Claire [306] see Lemaitre, Coline

Alix, Claire [307] see Taieb, Juliette

Alix, Claire [307] see Thirouard, Constance

Alker, Zoe [62] see Mant, Madeleine

Allard, Amélie (Rhode Island College)

[153]

Colonialism, Waterways, and Relationships in the Late Eighteenth-Century Fur Trade

In the late eighteenth century, the Mississippi Headwaters and Great Lakes area bustled with mobile European- and métis-descended traders hoping to make a trade with local Indigenous peoples. Often referred to as “the fur trade,” this willful exchange provided a stage for sets of relationships to be established, negotiated, and contested on a daily basis, including connections to the landscape. Waterways were particularly important in this context, as they provided the main means of travel, permitting traders to spread their posts and influence across the landscape of the interior. As such, waterways played an often-underestimated role in the creation of contested landscapes and social relationships. In this paper, I use documentary sources as well as data from two archaeological collections (Réaume’s Leaf River Post, MN, and underwater collections currently housed at the Royal Ontario Museum) to consider the ambivalent nature of intercultural relationships. The latter arose when colonial ideals and assumptions informed daily practices and the geographic imaginary of traders. I argue that ambivalent relationships also extended to the broader landscape (and waterscape), emerging out of the traders’ mobile lifestyle (and associated labor practices, risks, and anxieties) as well as contested sharing of knowledge, practices, and geographic imaginaries.

Allard, Francis (Indiana University of Pennsylvania)**[289]***Early Maritime Interaction Networks in the South China Sea: A Multidisciplinary Approach*

Well before the establishment—during the last two centuries BCE—of a “Maritime Silk Route” linking China to maritime lands to its south, archaeological evidence indicates the existence of wide-ranging links between coastal regions of the South China Sea. By the fifth century BCE, different types of goods moved along these maritime networks, including stone and glass ornaments (especially beads), as well as ceramic vessels and vessel styles. Two elements of these early networks of interaction are worth noting. First, the evidence for long-distance contact consists mostly of exotic goods and ornaments, and second, the relevant coastal cultures were all pre-literate. Partly for these reasons, understanding the nature and impact of these early interaction networks remains a challenge, with some suggesting that they represent the maintenance of patterns of migration and interaction established during the much earlier Austronesian expansion, while others point to the participation of wide-ranging “Sea Nomad” groups. As a way to move the discussion forward, this presentation argues for a multidisciplinary approach that incorporates oceanographic (e.g., winds; currents, deltaic geomorphology; interisland visibility) and ethnographic data. Comparisons to the Mediterranean also provide insights into the nature of early networks of interaction in the South China Sea.

Allen, Forest (National Park Service) and Adam Wiewel (National Park Service)**[177]***Adobe and Sod: Recent Results from a Multi-instrument Geophysical Survey at Fort Larned National Historic Site, Kansas*

Between 2021 and 2023 archaeologists at the Midwest Archeological Center conducted a multi-instrument geophysical survey at Fort Larned National Historic Site in Kansas. The survey sought to expand on previous archaeological investigations and to provide baseline documentation of archaeological resources across multiple areas at Fort Larned. Our survey was primarily focused on accurately mapping some of the earliest non-extant adobe and sod structures at the fort, to assess their condition, and to identify other historically documented structures that have not been relocated. To achieve this goal, an earth resistance and ground-penetrating radar survey was conducted over an area of approximately 1.3 ha (3.2 acres). The results of this survey revealed significant details about several structures including exterior dimensions and interior room divisions. Additionally, we utilized a wide-area survey approach with magnetometry to address areas of the fort that previously received less attention. Using a cart-based, 16-channel magnetic gradiometer towed by a UTV, a cumulative area measuring approximately 54 ha (133 acres) was surveyed across the Fort Larned landscape. The resulting baseline geophysical inventory will be utilized in planning and management of archaeological resources at Fort Larned.

Allen, Mitchell (University of California, Berkeley), John Whitney (US Geological Service) and Silvio Pezzopane (Independent Researcher)**[310]***The Role of Groundwater and Sinkholes on Bronze and Iron Age Settlement Patterns in Sistan*

Archaeologists have leaned heavily on fluctuations in the channels of the Helmand River to explain the rise of Shahr-i Sokhta and the Helmand Civilization during the third millennium in the Sistan basin between Afghanistan and Iran, the subsequent abandonment of the region, and the return of complex settlement in the mid-first millennium BCE. Recent satellite imagery, geological modeling, and archaeological ground surveys offer new insight into regional water resources and their impact on settlement patterns. Unlike riverine settlements in Mesopotamia and the Indus Valley, Sistan is a fluvio-lacustrine environment located in a closed basin where surface and ground waters are trapped in a subsiding depression. Water collects along faults and fracture lines and dissolves the evaporitic lakebeds and bedrock beneath, forming hundreds of sinkholes. Survey data shows that many sites identified in Sistan were situated near these sinkholes or along local stream channels emanating from springs, which dried during periods of drought and filled with water in wetter periods. If local sources of water were available for human occupation and for agriculture, hunting,

and fishing, we contend changes in early Sistan settlement through time depended on groundwater availability, not primarily on changes in the Helmand channel or its distributaries.

Allen, Robert (New York University Abu Dhabi)

[145]

Eating with Neanderthals

[WITHDRAWN]

Allison, James [285] see Corrales, Carolina

Alloteau, Fanny (Bordeaux Montaigne University), Ayed Ben Amara (Bordeaux Montaigne University), Nadia Cantin (Bordeaux Montaigne University), Alejandra Castañeda (Paris I Panthéon-Sorbonne University) and Véronique Darras (Paris I Panthéon-Sorbonne University)
[240]

Geochemical Investigation of Chupícuaro Ceramic Wares (Formative Mesoamerica)

In the framework of the CHUPICERAM project, we perform geochemical analyses to investigate the chemical composition of the pastes and the decorations of ceramic wares excavated from two different archaeological sites (TR6 / JR24) and assigned to two different periods (Chupícuaro / Mixtlan) of the Chupícuaro culture. A corpus of study of around 200 sherds was selected, based in particular on their representativeness of the different stylistic groups encountered, and several analytical methods were used (p-XRF, μ -Raman, hyperspectral imaging, SEM-EDX, FTIR). All the ceramic pastes are identified as non-calcareous (CaO < 2.5 wt%). Our results show compositional differences of these pastes between archaeological sites and through time (Chupícuaro sherds versus Mixtlan sherds), both for major elements and trace elements. Regarding the decorations, they consist of a mixture of clay and iron oxides for the reds, and of clay, iron oxides, and manganese oxides for the black/café ones. The clayey beige decorations are rich in calcium. A change in raw material at the Chupícuaro / Mixtlan transition is highlighted for the black/café decorations in particular. On the basis of these results, our hypotheses concerning the production of Chupícuaro ceramics and its diachronic evolution will be introduced in the present communication.

Allshouse, Aurora [268] see Faber, Sarah

Allué Andrés, Lydia (Université Toulouse 2; Universidad de Zaragoza) and Ted Gragson (University of Georgia)

[301]

Scalar Responses to Production and Extreme Conditions in the Southern Borderlands of Aragon between AD 1248 and 1559

Alfonso I took Daroca, an important city in the Upper March of Al-Andalus since the ninth century, by conquest in AD 1120. He granted the city a large rural territory that evolved by AD 1248 into a new property regime called the Comunidad de Aldeas de Daroca. Four such entities emerged in the southern borderlands of Aragon independent of the control from (if not always the influence) of the city; they took their name from and having the royal privilege of self-governance. The Comunidad de Aldeas de Daroca eventually comprised 96 co-equal villages spatially organized into five districts (sesma) and politically organized into a quasi-sovereign council of villages. The Comunidad had usufruct over a shifting mosaic of managed forests, grazing lands, and croplands across ca. 5,000 km² subject to a Mediterranean climate regime. Most importantly, the member villages controlled up to 203 wood-pastures (dehesas) to which the Council of Villages negotiated use-contracts with the Cattleman's Association of Zaragoza. The region experienced a succession of extreme environmental and socioeconomic conditions beginning middle of the thirteenth century, yet the Comunidad de Aldeas de Daroca was buffered by scaling responses among the coalition of equal villages according to their location and context.

Allué Andrés, Lydia [233] see Gragson, Ted

Almeida, Fernando [54] see Kater, Thiago

Almeida, Martina, Fernando Astudillo (Universidad San Francisco de Quito) and Juan Argoti Gómez (Universidad San Francisco de Quito)

[42]

Liquid Nationalism: World War II Archaeology at Cerro Orquilla US Rada Station, Isabela Island, Galápagos (1940–1946)

During World War II, the US Army and Navy built joint bases on some islands and archipelagos in the northeastern Pacific to protect the Panama Canal. The Galápagos Islands played a crucial role in protecting the canal zone due to its strategic geographical location between Panama and the Gulf of Guayaquil. A central military base was built on Baltra island, and some adjunct radar stations and support bases were built on other islands. Three radar stations were built on Isabela Island to detect possible air attacks from the west. Constructions of these stations caused important landscape modifications to previously unoccupied ecosystems. During archaeological survey in summer 2023, we defined the occupation area and the layout of the Cerro Orquilla radar station, which was occupied from 1940 to 1946. During fieldwork, several abandoned structures were identified and artifacts of different types were collected. An important number of glass bottles of North American provenience were found. The goal of this study was to identify the assemblage of glass bottles to explore aspects of the daily life of the soldiers who served on Isabela Island and the Galápagos during World War II.

Almeida, Martina [18] see Astudillo, Fernando

al-Nahar, Maysoon [281] see Beller, Jeremy

Alonso, Alejandra

[261]

Discussant

Alonso Eguiluz, Monica (AMGC-Vrije Universiteit Brussel), Rosa Maria Albert (ICREA/Autonomous University of Barcelona), Michael Toffolo (CENIEH), Liv Nilsson Stutz (Linnaeus University) and Aaron Stutz (Bohusläns Museum)

[93]

High-Resolution Microarchaeological Techniques for Understanding Depositional and Postdepositional Processes in Mughr-el Hamamah Cave (Jordan)

The rich archaeological record of the Mughr-el Hamamah (MHM) site in Jordan is key to understanding the Middle-Upper Paleolithic transition in the Levant. However, important postdepositional processes due to pastoral activities during the twentieth century have affected the archaeological deposits and need to be taken into account. The archaeological deposits consist of Layer A, resulting from these pastoral activities, and Layer B, dated 44.5–40.0 ky BP. Field observations suggest that Layer B has been partially altered by shepherds, affecting the Early Upper Paleolithic deposits. Here we present the results of a multiproxy microarchaeological approach applied to MHM aimed at delineating these disturbances and other postdepositional processes that may have affected the archaeological record of Layer B, including plant microremains (phytoliths). Fecal spherulites, were used to define the limits of disturbance in Layer B. Micromorphological analysis identified four intact depositional facies in Layer B, representing an interplay of natural and anthropogenic factors. Characteristic dicotyledonous phytoliths were identified in the hearths, indicating the use of wood as fuel. Fruit phytoliths also occurred in the western area, where well-preserved

charred wood and seeds were found. Finally, herb-diagnostic phytoliths correspond to C₃ and C₄ taxa indicating an overall humid environment with dry spells.

Alperstein, Jonathan (Dartmouth College), Jesse Casana (Dartmouth College), Carolin Ferwerda (Dartmouth College), Madeleine McLeester (Dartmouth College) and Nathaniel Kitchel (Salve Regina)

[283]

Woodland Villages in the Upper Connecticut River Valley: Landscape-Scale Geophysics as Evidence for Large Sedentary Settlements in Northern New England

The general absence of Woodland village sites within New England's archaeological record has generated considerable debate and varied interpretations of past Indigenous subsistence-settlement strategies. In Northern New England, scholarship suggests this area was dominated by hunter-gatherers until the arrival of Europeans, indicating sedentary villages were rare and only located within Southern and Coastal New England. Locating villages or even individual house sites to address the accuracy of this hypothesis is challenged by poor preservation resulting from centuries of colonization and environmental conditions. After employing ground-penetrating radar (GPR), we successfully mapped cultural features along the Connecticut River Valley. These features include dense groupings of Woodland houses. Here, we reveal a dense archaeological landscape of sites within Northern New England and provide evidence to suggest the existence of larger villages in the region.

Alperstein, Jonathan [84] see Casana, Jesse

Alsgaard, Asia (University of Bergen)

[55]

Chair

Alsgaard, Asia (University of Bergen), Karen van Niekerk (SapienCE Centre for Early Sapiens Behaviour), Carin Andersson (NORCE Norwegian Research Centre) and Mimi Lam (Centre for the Study of the Sciences and the Human)

[55]

Exploring Characteristics of Sustainable Coastal Exploitation during the Middle and Later Stone Ages in South Africa through Fish Bones and Seal Teeth

This interdisciplinary research project investigates both the emergence and defining characteristics of sustainable coastal exploitation. The southern coast of South Africa has the longest history of sustained coastal exploitation globally, despite rising and falling sea levels, changing coastal habitats, and variations in seasonality and temperature. Given this long history of coastal exploitation, with the earliest evidence of systematic coastal exploitation by 110 ka to the present, we aim to explore how humans took advantage of changing coastal environments as part of an overall sustainable subsistence strategy. Stable isotope measurements of fish bones and seal teeth (as proxies for habitat use) and analysis of fish otoliths (a proxy for seasonal exploitation) can provide insights into where and when humans were exploiting fish and seals. Meanwhile, changes in the body size of a harvested fish species over time, namely, the yellowtail amberjack (*Seriola lalandi*), can be used as a proxy for subsistence intensification. In summary, we explore the origins of and patterns within and across site-specific changes in fish and seal habitat use, seasonal exploitation, and subsistence intensification from four Stone Age sites in southern Africa: Blombos Cave, Klasies River Main Site, Hoffman's/Robberg Cave, and Nelson Bay Cave.

Alt, Susan (Indiana University, Bloomington)

[56]

Visible and Invisible Workings of Cahokia

Cahokia has long been subjected to terminological contention, failing to fit categorical configurations such as state or chiefdom but has now become commonly referred to as an urbanism—effectively dodging the

chiefdom/state terminological quandary. What if much of the categorical problem lies in looking at the world through a Euro/American lens? Traditional Western definitions of sociopolitical types focus too narrowly on “power over” rather than concepts expressed as important community values by indigenous scholars, such as “in relation with,” “responsibility to,” and “responsibility with.” Shifting focus to prioritize Indigenous values emphasizes relationality, landscapes, other than human persons, communal values, and the numinous. This focus reconfigures aspects of Cahokia that have long been dismissed, misunderstood, or ignored. Here, I explore how Cahokia became an urbanism as a result of a religious movement and frame this development by calling on Indigenous understandings of community, power, authority, the numinous, and relationality. Drawing on archaeological data from Cahokia, outlying shrines, and other nodal centers as well as Indigenous values, I argue that Cahokians’ ideologies were in fact built into the architectural features that they constructed and were emphasized by the Cahokians’ chosen landscapes.

Altizer, Kendy

[130]

The Most Inhospitable of Environments: Enslaved Life in the Rice Fields of the Santee Delta

Located between Charleston and Myrtle Beach, South Carolina, the Santee Delta is a unique wetland habitat characterized by tidal marshes and low-lying barrier islands. Situated between the North and South Santee Rivers, the delta is a critical stopping point for a number of migratory birds and is also a popular duck hunting destination. However, historically, it played an important role in the British Atlantic world as it was also the heart of rice culture in the colonies. Once a thriving industrial complex centered on the growth and processing of rice, this wetland environment was home to thousands of enslaved people whose labor and knowledge of rice cultivation enriched the White planter class that owned these lands. Though much of the above ground evidence for processing areas and settlements are gone, there is archaeological evidence of this industry and the people that built it. By using a multiple lines of evidence, this paper will show how people utilized this remote and inhospitable landscape and why we should care about it today.

Altschul, Jeffrey (SRI Foundation/Coalition for Archaeological Synthesis)

[308]

Collaborative Research, Synthesis Centers, and the Challenge of Connecting the Past to the Present

Synthesis in archaeology has traditionally been the province of the lone scholar, requiring heroic efforts of finding, integrating, and interpreting the results of published and unpublished reports. Such an approach is no longer tenable. The advent of CRM has led to a mountain of documented but only partially interpreted data. Academic and applied research projects now incorporate digital technologies which produce data at a pace that outstrips investigator’s ability to absorb them. It is telling that at a time when ample data on past human behavior and natural environments, the tools to make such data interoperable, and the desire to address long-term processes underlying many of today’s existential challenges exist, the major hinderance to synthesis are the traditions and culture of archaeology. About 30 years ago, other sciences facing similar issues came up with a novel solution: the synthesis center. These centers replaced lone scholars with working groups of collaborators who represent all sides of a problem, stress inclusivity and diversity, and who are provided the physical and digital tools to succeed. In 2017, archaeology joined these sciences with the establishment of the Coalition for Archaeological Synthesis (CfAS). In this paper, I trace CfAS’s history and accomplishments.

Altschul, Jeffrey [267] see Douglas, Diane

Alva, Ignacio [212] see Klaus, Haagen

Alva Valverde, Giuseppe (Proyecto de Investigación Arqueológica y Conservación Chavín de Huántar, PUCP), Óscar Arias Espinoza (Proyecto de Investigación Arqueológica y Conservación Chavín de Huántar) and Mary Claudia Avila Peltroche (Universidad Nacional Mayor de San Marcos)

[27]

Renovación del templo en Chavín de Huántar en el Periodo Formativo Tardío: Una interpretación desde el estudio de los materiales

En esta presentación expondremos sobre los análisis realizados a los objetos hallados en contextos de ofrendas, asociados a lo que hemos definido como la renovación del templo en Chavín de Huántar, practica ritual realizada durante el Periodo Formativo Tardío (900-450 aC). Los resultados nos han permitido reconocer el mantenimiento de un patrón de deposición asociado a la construcción de arquitectura ceremonial por más de 500 años. Además, logramos identificar la proveniencia de estos objetos desde ecosistemas lejanos como las playas o lomas costeras.

Alva Valverde, Giuseppe [27] see Lema, Veronica

Alvarado, Claudia (University of Copenhagen) and Takeshi Inomata (University of Arizona)
[125]

Landscape Modifications and Water Management at Aguada Fénix

The latest archaeological evidence has shown that 10,000 years ago the landscapes of the actual Mexican territory suffered constant changes due to human activities. Fire, horticulture, species dissemination, and agriculture are among the factors that played a significant role in landscape transformations. The area occupied by the monumental site of Aguada Fénix was not an exemption. The creation of artificial reservoirs and hydraulic works dated from around 1100 BC show the advanced knowledge the builders had on water management, one of the most abundant resources found around the area. The requirements to reach the final goal took huge human force at a communitarian level to create their own environment. Archaeological works at Laguna Naranjito—a shallow lake found to the west part of the artificial plateau—evinced that the area underwent major changes. This talk is about those modifications, the hydraulic features, the landscape transformation, and the human force implied in this engineering work.

Alvarado, Claudia (University of Copenhagen)

[214]

Chair

Alvarado, Claudia [214] see Nielsen, Jesper

Alvarado, Claudia [214] see Testard, Juliette

Alvarez, Carlos (Centro de Estudios Mayas, UNAM) and Lynne Lowe (Centro de Estudios Mayas, UNAM)

[114]

An Iconographic Study of Pottery Stamps from a Postclassic Village in Las Margaritas, Chiapas, Mexico

The abundance of pottery stamps, variety of designs and quality of its craftsmanship during the Postclassic period, contrasts with the scarce studies regarding these special artifacts whose analysis can contribute to the knowledge of significant aspects of ancient Maya culture. These stamps were used to imprint decorative motifs on the human body, fabrics, or other materials, and its designs, loaded with symbolism, merit further attention. In this paper we will present the preliminary results of a typological analysis of motifs carved on a group of 206 stamps, excavated at a Late Postclassic and colonial (AD 1250–1524) settlement in the Maya Highlands, at Las Margaritas, Chiapas, Mexico. The designs in our sample show schematic representations and animal figures, like birds, snakes and mammals, with important symbolic implications in local culture.

Álvarez, Maria Clara [200] see Gutiérrez, María

Álvarez, Ricardo [158] see Torres, Jimena

Alvarez Soncini, Maria Celina [178] see Huidobro, Consuelo

Alvey, Jeffrey (Missouri State Historic Preservation Office), Virginie Renson (University of Missouri, Columbia), Diana Greenlee (University of Louisiana, Monroe) and Tiffany Raymond (Binghamton University)

[24]

New Insights into Poverty Point Exchange through Lead Isotopic Analysis of Galena

The mineral galena is well established as a raw material used by prehistoric peoples of eastern North America from the Late Archaic through Mississippian periods. In the lower Mississippi River Valley, numerous specimens have been recovered at sites occupied by groups associated with the Poverty Point culture. The current study involves isotopic analysis of galena specimens from two of those sites, Poverty Point and Claiborne. These results demonstrate a strong connection between the galena specimens and source areas in southern Missouri and northern Arkansas. There is no evidence of connections to Upper Mississippi Valley source areas as reported in some previous studies. Because the specimens were recovered from excavated contexts, some of which have associated radiocarbon dates, these findings are placed within a more secure spatial and temporal framework than has been typical of previous studies into the exploitation of galena by Poverty Point culture groups.

Alway, Margaret [72] see Morgan, Brooke

Ames, Christine [98] see Troccoli, Ruth

Ames, Christopher (University of Victoria)

[139]

Chair

Ames, Christopher (University of Victoria) and April Nowell (University of Victoria)

[139]

Human-Environment Dynamics at the Arid Margin of the Levant: Fluctuating Freshwater Resources between 400,000 and 40,000 Years Ago in the Greater Azraq Oasis Area, Jordan

The Azraq Basin is a 12,000 km² internal drainage system at the eastern margin of the Levant. The center of the basin, which we refer to as the Greater Azraq Oasis Area (GAOA), is characterized by a mudflat flanked by two historical wetlands. Desiccation of these wetlands in the early 1990s and subsequent construction activities have exposed middle and late Pleistocene wetland deposits containing abundant Lower, Middle, and Upper Paleolithic stone tools and faunal remains. Landscape-focused geoarchaeological research has since demonstrated that the past 350,000 years in the GAOA is characterized by at least three local wetting-drying cycles that would have dramatically shifted the quantity and distribution of freshwater resources, ranging from expansive wetland landscapes to desert refugia characterized by isolated spring pools—changes that would have significantly impacted the mobility decisions and settlement patterns of Paleolithic inhabitants. In this paper, we present results of our ongoing efforts to integrate the Pleistocene archaeological, paleoenvironmental, and paleoclimatic records of the GAOA to elucidate the relationship between fluctuating freshwater resources and hominin adaptation in the Basin between 400,000 and 40,000 BP.

An, Na [51] see Fu, Yue

An, Ting

[256]

MicroCT Analysis Reveals Beginning of Rice Domestication in the Lower Yangtze Valley during the Tenth Millennium BP

The Lower Yangtze valley is widely recognized as the earliest center of rice agriculture. The process of rice domestication, based on the morphology of spikelet bases, has been traced to between 9000 and 5000 BP. However, the domestication status of rice before 9000 BP remains a subject of debate due to the near absence of macrobotanical remains in the region. This research aims to address this gap by investigating rice impressions and inclusions found in ceramic sherds from the early Shangshan site (ca. 12,711–8538 cal BP). Utilizing quantitative microCT analysis, this study examined 184 impressions of *Oryza* sp. spikelet bases from ceramic sherds, generating the most extensive database of rice remains dating to the early Shangshan phase. The results present evidence for the early onset of the rice domestication process during the tenth millennium BP, supported by the presence of 12% non-shattering-type spikelet bases. This study represents a pioneering use of microCT quantitative analysis of ceramic sherds with early plant impressions.

Anaya Hernández, Armando (Universidad Autonoma de Campeche), Nicholas Dunning (University of Cincinnati), David Lentz (University of Cincinnati), Jeffrey Brewer (University of Cincinnati) and Christopher Carr (University of Cincinnati)

[31]

Paleoenvironmental Research at Yaxnohcah, Campeche, Mexico

When the Proyecto Arqueológico Yaxnohcah began 13 years ago in 2011, some of our driving questions centered on the Bajo el Laberinto and the role that this enormous wetland played in the rise and development of what was to become the great city of Yaxnohcah: Why were the early inhabitants of the Central Karstic Uplands drawn to this environment? Were the extensive wetlands the primary reason for the settlement of the region? Had this bajo depression been altered from perennial to seasonal due to erosion and deforestation? Is there evidence that the inhabitants of Yaxnohcah managed their habitat sustainably? To address these questions and others that emerged because of our investigations, we included in our research agenda actions geared toward the recovery of data that would give some insight in how the ancient inhabitants of Yaxnohcah managed their landscape. In the process several scholars joined the project adding within their disciplines more knowledge to our understanding of urban and land management processes of the bajo region. In this paper we synthesize the works that have been carried out through the life of the project, to interpret how the ancient inhabitants of the region modified their landscape.

Anaya Hernández, Armando [31] see Dunning, Nicholas

Anaya Hernández, Armando [78] see Lockett-Harris, Joshua

Anaya Hernández, Armando [78] see Longstaffe, Matthew

Anaya Hernández, Armando [31] see Montgomery, Shane

Anaya Hernández, Armando [78] see Reese-Taylor, Kathryn

Anderson, Arthur [154] see Spahr, Tim

Anderson, David G. [173] see Wells, Joshua

Anderson, David S. (Radford University)

[14]

Teaching Archaeological Epistemology through Tabletop Gaming

More often than not, the general public learns about archaeology through flashy headlines proclaiming glamorous finds and grand interpretations with little to no explanation of how those conclusions are drawn. As a result, students in their first archaeology class struggle to understand the reasons behind learning archaeological methods and the detailed work of artifact analysis. In an effort to help students come to a better understanding of how archaeologists construct knowledge of the past, I am developing a tabletop board game that models the research process in archaeology. The game can be played in 30–50 minutes by a group of 3–5 students and challenges them to select research questions, draft a team of specialists, survey, excavate, and analyze an archaeological record created by a series of card decks. Initial playtests have received positive feedback from students, and another round of playtesting will be conducted shortly before the Society for American Archaeology meetings. The ultimate goal of this work is to create a publicly accessible resource that helps students both learn how archaeologists think and have fun in the process.

Anderson, David S. (Radford University)

[65]

Discussant

Anderson, Karen

[284]

Local Impact of Tiwanaku at the site of Pinami, Cochabamba: Synthesis of Diachronic Ceramic, Household, Food Production, Mortuary, and Isotopic Data

The Tiwanaku state has been shown to have had varied methods for interacting with and influencing its peripheries. This poster presents a synthesis of multiyear excavations at the site of Pinami in the Central Valley of Cochabamba that provides both diachronic depth from the Late Formative, Middle Horizon and Early Intermediate and a wide range of datasets including ceramic, household, mortuary and isotopic data. Considered as a whole the data shows evidence of significant Tiwanaku impact by the late Middle Horizon on all lifeways. I conclude that the data supports a model of Tiwanaku using indirect control in Cochabamba.

Anderson, Shelby [20] see Buonasera, Tammy

Anderson, Shelby [262] see Lewis, Michael

Anderson, Siobhan (Shumla Archaeological Research and Education Center)

[244]

Chair

Anderson, Siobhan (Shumla Archaeological Research and Education Center), Carolyn Boyd (Texas State University), Phil Dering (Texas State University) and David Keim (Shumla Archaeological Research and Education Center)

[244]

Brushstrokes of the Past: Unraveling Pecos River Style Murals with Harris Matrix Composer

Stratigraphic analysis has long been a cornerstone of archaeological research, and the practice of displaying and analyzing complex relationships between stratigraphic surfaces and layers using Harris Matrix Composer is commonplace. New methods in rock art research have incorporated an understanding of stratigraphy in the analysis of paint layers. As a part of the ongoing Hearthstone Project, archaeologists at Shumla Archaeological Research and Education Center (Texas) have analyzed the paint layers at 10 Pecos River Style (PRS) rock art sites and created Harris Matrices to graphically display the complex stratigraphic relationships revealed by this analysis. Doing so reveals novel issues that arise from using software designed for layers of sediment on rock art. With that said, using Harris Matrix Composer in this manner to differentiate between distinct painting events allows us to argue that PRS murals were primarily rendered during a single painting event as a composition rather than separate painting events accumulated over time.

Anderson, Siobhan [156] see Radillo Rolón, Diana

Anderson, Zoe [257] see Blake, Asher

Anderson Stamnes, Arne [24] see Greenlee, Diana

Andersson, Carin [55] see Alsgaard, Asia

Andreassen, Olaug [18] see Martinsson-Wallin, Helene

Andrews, Charles (CU Boulder)

[94]

Bayesian Demographic Reconstruction in the US Southwest: “Playing” with Priors

Paleodemographic reconstruction is an essential prerequisite for understanding human ecology of ancient societies. In the US Southwest several studies have employed Bayesian statistical methods to improve population estimates. This paper compares two alternative implementations of Bayesian statistics to demographic reconstruction in the US Southwest—Empirical Bayesian Analysis and a more generic Uniform Probability Density Analysis (UPDA). The two methods differ significantly in their approach to the construction of “Priors”, the creation of which is a point of contention for critics of Bayesian statistics. This study employs the UPDA approach for the first time in the VEP2N study area where previous work employed the Empirical methodology to assess the impact of this difference on final results, and to explore how alternative Prior construction within the UPDA approach affects final outcomes. The work concludes that Prior construction must be performed thoughtfully, and while the more generic UPDA approach does not produce results drastically different from the highly specific and customized Empirical approach, that is critically contingent on the specific selection of sites and ware types used for Prior construction. For example, alternative data selection for UDPA priors can generate three, rather than the two, demographic cycles of the Empirical method.

Andrews, E. Wyllys, V (Tulane University)

[292]

Moderator

Angelbeck, Bill (Douglas College)

[298]

Chair

Angelbeck, Bill (Douglas College)

[298]

The Possibilities of Sociopolitical Forms: An Archaeological Existentialism for Collectives

In *The Dawn of Everything*, Graeber and Wengrow present a thought-provoking archaeological history of humankind that challenges common understandings of our pasts. Instead of a linear progression from egalitarian pasts to state-based hierarchies, they show the spectrum of variability of sociopolitical structures that have emerged throughout history. In so doing, they raise awareness of human sociopolitical possibilities, bringing readers to reflect on and question the apparent fixity of current state forms of rule, which are commonplace today. Here, I focus on this facet of their work, their highlighting of sociopolitical possibilities that were actualized in the past. They foster a sense of anarchic play in social and ritual practices, showcasing

other ways of living in the world and with others. While Marx and Kropotkin more often provided sketches of humanist ideals for how political arrangements could be, Graeber and Wengrow provide numerous case studies of realized possibilities from the archaeological record. I will discuss how they have provided us with a form of existentialism that is not concerned primarily with the subjective individual, but one that is anchored and operates at the level of the collective.

Angelbeck, Bill [35] see Oliver, Kristin

Angelini, Sam [203] see Edgcomb, Owen

Angelo, Dante

[142]

Discussant

Angeloff, Nick, Mark Castro, Marisol Cortez-Rincon and Engin Nasuh (NI Institute and Museum Bitola)

[141]

Macedonian Presence on the Crnobuki Gradiste Riches to Rags: Year 1

Cal Poly Humboldt and the Museum Bitola initiated a long term research project in the Pelagonia region of North Macedonia, this paper presents the results of the initial field season. Our expectations were that the site was the location of a remote Macedonian garrison defending against Roman incursions. We conducted excavations, remote sensing and in depth gray literature research in 2023 and discovered a complex fortress area with extensive habitation areas, workshops, artifact deposits, deeper time depth than expected, and tantalizing previous work that all points toward a significant Macedonian City existed at this location that persisted through Roman conquest. Remote sensing data, excavation data, and past archaeological work are analyzed and presented.

Angelucci, Diego [151] see Carrer, Francesco

Anglitz, Barbara (Independent Heritage Field Researcher)

[95]

How Grassroots Initiatives Preserve and Protect Tunisian Cultural Heritage

The Medina of Tunis is an ancient Islamic city and a UNESCO World Heritage site. However, it is in a vulnerable state, with many historic palaces, ancient dwellings, and monuments confronting neglect, leading to an alarming rate of deterioration. In 2021, an independent ethnographic research study was conducted in the Medina of Tunis in collaboration with Blue Fish, a social enterprise consultancy. Through assessing local heritage values and the extent of community awareness of the significance of preserving historical assets, the research contributed to local knowledge creation in ways that help heritage advocates to better understand the challenges around preserving the Medina and implement practical strategies and interventions to strengthen preservation efforts. The results of the research highlighted the important role that grassroots heritage organizations play in shifting existing negative perspectives of the Medina, educating the public, and raising awareness around the Medina's rich heritage. In this session, a short video will first be presented to tell the story of the Medina. This will be followed by a presentation of the highlights of the research findings, demonstrating how cultivating grassroots heritage organizations and inclusive participation have proven successful in promoting awareness, revitalizing, and protecting heritage in the Medina.

Anschuetz, Kurt [112] see Duwe, Samuel

Antezana Soria, Valeria (Universidad de Tarapacá, Agencia Nacional de Investigación y Desarrollo de Chile)

[178]

Liberal Logics and Their Influence on the Management of Republican Haciendas of Yocalla and Puna in Potosí, Bolivia
This paper will present the preliminary results of an archaeological investigation, currently in progress, carried out in the ex-haciendas of Yocalla and Puna, in Potosí, Bolivia. Based on archaeological survey, surface material, architectural evidence and historical documentation from the nineteenth and twentieth centuries, it is intended to explore the influence of the liberal logics introduced by the Republican elites in the spatial management of the haciendas. These are located in spaces that were previously subjected to the forces of Potosí's mining market during the colonial period. The archaeological and historical evidence allows us to identify continuities and transformations in the spatial organization of the haciendas that reflect power relations between landowners and workers. The consequences of these changes are still visible today, 70 years after the dissolution of the hacienda system in 1953.

Antoniuk, Caitlyn (University of Illinois, Urbana-Champaign)

[331]

Chair

Antoniuk, Caitlyn (University of Illinois, Urbana-Champaign)

[331]

Sticky Places: Persistence and Relationality

The goal of this session is to explore the factors underlying persistent places, specifically thinking beyond resource availability or representationalist notions of meaning bestowed by humans. In this paper, I outline the theoretical ideas and concepts that underlie this symposium. I argue that all places exist as relational fields, and persistence comes from the emotional experiences and relationships cultivated in a particular place. Persistence, then, is not only about meaning given to a place, but about those qualities, relationships, and effects that lead to its longevity. Importantly, the relationships that generate persistence involve a plethora of nonhumans, as well as relationships and experiences across time and space, as places become linked in ontological ways of knowing the world. Additionally, while persistence implies a fixedness, I suggest instead that it is a kind of stickiness, or better yet an accumulation of things, practices, experiences, memories, emotions, and more that are generated from these relationships. What are the ways in which places gather up relationships? How does permanence fit into relational archaeologies? Thinking about persistence has implications for how we think about places over time, extending to heritage management, Indigenous rights, and how we think about the environment generally.

Antorcha Pedemonte, Ricardo, Lane Fargher (PAST Foundation / Ohio State University) and Alexander Correa-Metrio (Universidad Nacional Autónoma de México [UNAM])

[320]

Cultural Footprints Unearthed: Exploring Settlement Patterns and the Constructed Landscape of Yalahau, Yucatán

The discourse surrounding the environmental impact of humans on Earth underscores the imperative to comprehensively grasp the temporal and geographical dimensions, as well as the transformative intensity of anthropogenic changes. The Parque Estatal de Yalahau Project, a multidisciplinary endeavor encompassing archaeology, paleoecology, and historical ecology, seeks to do this in Yucatán, Mexico. Its focus is to correlate historical occupation periods with landscape transformations in Yalahau's prehispanic settlement. Our objective is to elucidate the extent of impact, environmental change, and the evolving palimpsest of landscape transformations over the *longue durée*. In this paper, we report on our results which have revealed that the Yalahau site showcases a rational relationship with the environment. Its special design reflects a deliberate decision rooted in considerations involving the sustainable utilization and conservation of the natural surroundings. These decisions are underpinned by a profound understanding of the local terrain, soil characteristics, and the dynamics of wetland processes. Additionally, the paleoecological analyses on unconsolidated sediments samples, extracted from cores recovered in cenotes within the settlement and its

periphery, have shed light on substantial shifts in land use practices and climate over time. These findings suggest a dynamic adjustment response by the prehispanic population to fluctuating environmental conditions.

Anzellini, Armando (Lehigh University) and Jennifer Marla Toyne (University of Central Florida)

[211]

The Sum of Their Parts: Excavation and Inventory of Isolated Commingled Remains alongside Partially Articulated Individuals at Diablo Wasi, Peru

Funerary contexts of commingled remains generally fall into one of two categories: primary mass burials and secondary reinterments. Each of these commingled contexts has standards of documentation, collection, and inventory that have proven effective in the past. At Diablo Wasi, in the northern Peruvian Andes, the funerary contexts are a combination of primary depositions and taphonomic processes that replicate secondary deposits, requiring a new approach. The site consists of primary depositions of bundled individuals, but animal and human disturbances have destroyed many of the bundles and led to the degradation and disarticulation of the individuals placed inside the mausolea. Thus, partially articulated and bundled individuals can be found mixed with matrix and isolated skeletal elements. To more effectively excavate and inventory these contexts, we developed a mapping and numbering system that permitted us to enumerate all skeletal elements, regardless of their association or articulation, while maintaining the in situ relationships of individuals or skeletal elements that were articulated or in association. This system allowed us to calculate a minimum number of individuals using standard methods while simultaneously maintaining the contextual relationships that aid in laboratory analyses and the reassociation of individuals and isolated skeletal elements.

Anzellini, Armando [185] see Toyne, Jennifer Marla

Aoyama, Kazuo

[125]

Preclassic Maya Economy: Lithic Production and Exchange in Aguada Fénix and Its Neighboring Sites in the Middle Usumacinta Region, Mexico

This paper discusses the results of my diachronic analysis of lithic artifacts collected in Aguada Fénix and its neighboring sites in the Middle Usumacinta region, Mexico, in order to elucidate one aspect of long-term changing patterns in the Preclassic Maya economic systems. I reconstructed the precolumbian long-distance obsidian exchange system in the study region using a combination of pXRF and technological analysis, thus identifying the sources of imported raw material and finished products. Similar to Ceibal during the early Middle Preclassic period, El Chayal was the principal source for obsidian, with minor quantities of obsidian from San Martín Jilotepeque and Ixtepeque in Aguada Fénix and La Carmelita. After the early Middle Preclassic period, San Martín Jilotepeque began to account for most of the obsidian brought to Pajonal and Rancho Zaragoza. Notably, no Mexican obsidian artifacts were imported either to Ceibal or Aguada Fénix and the other sites in the Middle Usumacinta region except Pajonal during the Middle Preclassic period. The bottom line is that virtually all obsidian artifacts from the Middle Usumacinta region originated from highland Guatemala, suggesting the boundaries of obsidian exchange systems between highland Mexico and highland Guatemala during the Middle Preclassic period.

Aoyama, Kazuo [125] see Vázquez López, Verónica

Aparicio, Patricia (Postdoctoral Fellow), Jose Alberto Delgado Ramos (University of Oviedo, Spain) and Margarita Fernández Mier (University of Oviedo, Spain)

[310]

Water Management and Symbolism in the Agrarian Landscape of the Sondondo Valley, Peru

Terraces are the clearest evidence of landscape transformation in the highlands of the South-Central Andes of Peru; they represent a magnificent and complex solution to create cultivation areas where geographical

and climatic conditions were not ideal. Water management is an important piece of this system in which the water harvested in the puna area irrigates fields in the lower altitude zones of the valley. Our team focuses on the study of the agrarian landscape and prehispanic agriculture, excavating terraces at different elevations in the Sondondo Valley, Peru. Moreover, we have studied complementary areas such as storage structures, livestock corrals, and carved petroglyphs to understand the complex assembly of this system. In this contribution, we will present the analysis of the irrigation system in the valley and the study of the engraved rocky outcrops that represent the agrarian landscape, known locally as *maquetas*. They represent the agrarian landscape including the irrigation system as engraved canals and *qochas*. The excavation of one of them has shown their remarkable symbolism. The ritual significance of water in relation to the environment is still very important for Sondondo's communities that still cultivate this landscape using ancestral knowledge.

Apuzzo, Cassandra (Purdue University), Kory Cooper (Purdue University), Elizabeth Brite (Purdue University), Aysulu Iskanderova (Samarkand Institute of Archaeology) and Azizkhan Toreniyazov (Karakalpak Research Institute of the Humanities)

[42]

Metal Production at Abu Muslim qala: An Analysis of Metallurgical Waste from a Medieval Site in Central Asia
Abu Muslim qala is a multi-phase site located west of the Sultanuzdag mountain range in Karakalpakstan, Uzbekistan, with an occupation beginning as early as the seventh century AD. Situated along the route connecting two of the region's most prominent medieval cities, Abu Muslim qala may have played a role in the broader network of medieval metals trade between Central Asia and Europe. Located near an iron ore deposit, the site contains a slag mound and other metallurgical debris indicative of iron smelting. PXRf analysis of metallurgical waste collected in 2018 from the surface provided preliminary corroboration. Recent metallographic analysis indicates the use of local titanium-rich ores during metal manufacturing.

Aragonéz Sarmiento, Irving [281] see Dalton, Jordan

Arakawa, Fumi (Indiana University) and Stan Berryman (New Mexico State University)

[38]

Let's Put Our Differences Aside and Work Together: A Case Study in NAGPRA Consultation and Repatriation
Although the Native Americans Grave Protection and Repatriation Act (NAGPRA) was enacted in 1990, New Mexico State University Museum (NMSU) personnel struggled to complete the required inventory of their collections for more than 15 years. Personnel changes at the museum and a complex, poorly documented collection added to the difficulties of completing the NAGPRA inventory. In 2015, new museum staff reinitiated the NMSU NAGPRA process and explored new strategies for completing an inventory, initiating consultation meetings, and successfully repatriating human remains and associated funerary objects to affiliated tribes. This paper explains how we succeeded in completing our inventory and carried out our NAGPRA consultation meetings so that repatriation will occur. The lessons we learned may be useful to other small museums that still need to complete their NAGPRA obligations.

Aram, Bethany [222] see Martos Nieto, Miriam

Arano Recio, Diana [158] see Meinecke, Helena

Araujo, Astolfo (Museum of Archaeology and Ethnology, USP) and Leticia Correa (University of São Paulo)

[3]

Late Pleistocene / Early Holocene Human Occupation along the Tietê River, São Paulo State, Brazil

The Tietê River is historically known as one of the main human displacement axes between the eastern portion of SE Brazil and the inner portions of the continent, being navigable for most of its course. The use of this waterway back to a distant past can be inferred, but up to now, the archaeological evidence along the Tietê is scarce, both because of a lack of academic interest and the failure of previous CRM reports to convey basic information about the sites (either in terms of lithic and ceramic classification or even to provide any ages). The scope of this paper is to present new data about the late Pleistocene / early Holocene occupation along the Tietê River, gathered during a CRM survey on the shores of two dams related to hydroelectric powerplants, as well as inserting these data into a broader scenario that can be of help in understanding the peopling of Eastern South America.

Araujo, Astolfo [3] see Araujo, Renata

Araujo, Astolfo [3] see Constantino Perez, Glauco

Araujo, Astolfo [3] see Correa, Letícia

Araujo, Renata (Museum of Archaeology and Ethnology at University of São Paulo), Mercedes Okumura (University of São Paulo) and Astolfo Araujo (University of São Paulo)

[3]

Shaping the Past: A Geometric Morphometric Approach to the Diversity of Lithic Tools in São Paulo State, Southeastern Brazil

Geometric morphometrics is a powerful analytical method developed in evolutionary biology to study, quantify, and compare shape variations in biological specimens. Archaeologists have been applying geometric morphometric methods (GMM) to study shape variations in archaeological artifacts for more than a decade. GMM finds more frequent application in the field of evolutionary archaeology and lithic studies, where researchers can draw conclusions about cultural evolution, technological innovations, and the spread of ideas or practices in ancient societies by quantifying shape variations and changes over time. In this paper, we present partial results from the doctoral research currently under development by the first author, which is in its final phase. This project is framed within a cultural evolutionary approach and Cultural Transmission Theory, aiming to describe and compare the morphological variability of lithic bifacial points and lithic unifacial tools from hunter-gatherer groups in São Paulo State, southeastern Brazil during the Holocene. Our objective here is to demonstrate how GMM is an effective tool for describing the variation in formal lithic artifacts by comparing different areas within São Paulo State.

Arbolino, Risa (National Museum of American Indian)

[39]

Moderator

Arbuckle, Benjamin (University of North Carolina, Chapel Hill)

[249]

Boundaries of Interdisciplinarity: Can Zooarchaeology Handle Ontological Diversity?

Although cross-cutting disciplinary boundaries from its inception, zooarchaeology has traditionally been most at home among the positivist sciences. As a result, interdisciplinary work has proceeded most easily with science and science-adjacent fields (stable isotopes, aDNA, ecology, etc.) with impressive results. In this paper, I think through what happens when zooarchaeologists desire to explore interdisciplinarity in other directions (e.g., nonpositivism, posthumanism). How does a discipline centered in the biosciences handle ontological diversity? As an example, I focus on a process-oriented approach (specifically Deleuzian assemblage theory) thinking about how it can be used to reframe zooarchaeological research including the questions we ask, the data we assemble, and the ways we assess data. I identify points of friction with this approach within a field defined by the expectations and values of a self-consciously scientific discipline and the resulting practices of policing which are sometimes deployed to maintain traditional disciplinary structures.

Arbuckle, Benjamin (University of North Carolina, Chapel Hill)**[280]***Discussant***Arce Buitargo, Tomas (Master's Student), Irene Torreggiani (University of Oxford), Alexander Geurds (Oxford Systematic Reviews LLP), Marta Arzarello (Università Degli Studi di Ferrara) and Gabriele Berruti (Università Degli Studi di Ferrara)****[157]***Riverbank Insights: Exploring Prehispanic Adaptation in Central Nicaragua's Alluvial Landscapes through Archaeological Analysis and Local Wisdom*

“El Agua es Vida, si no hay Agua, no hay Vida” (“Water is Life”) says Doña Francisca (community of Huehuestepe, Mayales River Valley [MRV], Nicaragua). Today more than ever this sentence holds true, given water’s increasing significance in the global climatic debate. Rivers are essential to human life, yet it can also be destructive, to connect and ultimately to shape human-environmental interaction through time and space. To what extent has this relationship changed in central Nicaragua since prehispanic times? Can we assess this through archaeological methods? This presentation will show the final results of the Interdisciplinary Archaeological Project Finca Santa Matilda (PRISMA), which integrates the geoarchaeological analysis of Roberto Amador site (RA, MRV, Chontales) and local knowledge on water and aquatic environments. Specific attention will be given to the technological, statistical, and traceological analysis of RA lithic artifacts. PRISMA unveiled how human adaptation strategies in the MRV are strictly linked to people’s understanding of the river behavior, the selective use of riverine resources, and on the predictability of hydroclimatic fluctuations. We argue that a multidisciplinary archaeological research, combined with local knowledge, could contribute to envisioning a more inclusive approach for planning sustainable water and land-use practices in Nicaragua.

Archambault, Rachel (Université de Montréal)**[148]***Island Garbology: Methodology, Challenges, and Contributions to the Archaeology of Barbuda*

Islands like Barbuda are particularly sensitive to waste management policies and behaviors; in addition to having to manage their waste daily, they also suffer the effects of tourism and the marine litter washed up on their coasts. These challenges are certainly not new, but their complexity is increasing and the consequences are interfering more every day in the daily lives of locals and are visible in the heart of terrestrial and marine environments. In this context, archaeology can contribute to the understanding of the formation of spontaneous dumps in the natural environment, such as piles of waste along roadsides, in forests, on banks and at the bottom of waterways. These sites are complex, constantly changing, and sometimes used sporadically for decades, leading to major documentation challenges. How can we archaeologically document such sites? As part of our research on the island of Barbuda, we use photography, visual prospecting, sampling and photogrammetry to document contemporary spontaneous dumps. This article provides a review of the strengths and weaknesses of this methodology, as well as the contributions and future of the garbology project in Barbuda.

Archila, Sonia [112] see Trujillo, Judith

Archila Montanez, Sonia (Los Andes University) and Martha Mejía Cano (Los Andes University)**[217]***Early Use of High-Altitude Tubers in the Eastern Cordillera of Colombia*

In this paper we discuss the importance of high-altitude tubers to early peopling of northern Andean area of South America and their role in the colonization of environments like Bogota plain that resulted in different ways of inhabiting and transforming the region during the early and middle Holocene. We are interested in

the study of social aspects related with plant cultivation to understand the agency of hunter-gatherers in early domestication of plants, particularly their role in the establishment of high-altitude tubers as staple foods. The archaeobotanical analysis carried out at the archaeological site of Checua allows us to suggest that hunter-gatherers were collecting and cultivating plants during the time span of the occupation of the site (9500 and 5052 cal BP), as it is evidenced by the presence of starch grain morphotypes similar to those of present day cultivated plants like cubio (*Tropaeolum tuberosum*), ibia (*Oxalis tuberosa*), ulluco (*Ullucus tuberosus*), common bean (*Phaseolus* spp.), and mays (*Zea mays*). These data are supported by the analysis of dental calculus from human individuals buried at the site. This long cultural tradition is still present in rural areas of the Colombian Andean highlands where communities cultivate tubers as part of their cultural inheritance.

Ardren, Traci (University of Miami)

[246]

Discussant

[229]

Chair

Ardren, Traci (University of Miami), Scott Fitzpatrick (University of Oregon) and Victor Thompson (University of Georgia)

[229]

Agriculture Is Not Inevitable: Lessons in Foodways from Precolumbian South Florida

Some scholars have argued that the adoption of agriculture is inevitable and that Holocene climate changes forced complex societies around the world to domesticate plants and animals. But the complex cultures of precolumbian south Florida provide a rare example of persistent reliance on wild foods exclusively. Using paleobotanical data from recent research in the Calusa and Matecumbe regions, we show how wild plant and marine foods remained a significant component of ancient diets despite the adoption of agriculture in other parts of the peninsula. New attention to the dietary advantages of wild plant foraging provides additional insights into the choices made by ancient south Floridians and suggests avenues for alternative dietary choices today. In south Florida, agriculture was not inevitable and broadening our understanding of ancient food procurement strategies may provide useful examples for modern solutions to issues of food insecurity, sustainability, and resilience.

Areche Espinola, Rodrigo (University of Pittsburgh)

[193]

The Inka Road and Mobility of a Fisher Community in the Cañete Valley, Peru

The Inka Road system was a critical infrastructure for expanding and consolidating the Inka empire in the Andes. From the traditional view, the existence of the Inka Road across diverse regions was seen as an indicator of how the Inkas integrated and controlled the mobility of subject communities. Other recent perspectives have emphasized the mobility of local populations by using the Inka Road without explicit imperial control. In this presentation, we will identify the Inka Road associated with the Cerro Azul site through aerial photographs, historical maps and documentation, and field visits. The Cerro Azul site is a settlement occupied by a maritime community in the Cañete Valley, South Coast, Peru. The characteristics and route of this segment of the Inka Road at Cerro Azul enable us to discuss the mobility patterns at differentiated scales of the coastal route during the Inka empire.

Arellano, Monica [272] see Fournier, Nichole

Arellano, Monica [26] see Panich, Lee

Arévalo, Javier [117] see Correa Gurrulat, Itaci

Argote Espino, Denisse [252] see Pacheco Arias, Leobardo

Argoti Gómez, Juan (Universidad San Francisco de Quito)

[220]

Carved between Cartafuel and Coangue: Spatial Analysis of the Pasto Rock Art Sites of Carchi, Ecuador

In the social context of Andean prehispanic societies, petroglyphs constitute multivocal elements that stand out from the aggregates of material expressions of culture. As such, their condition as a cumulative of symbolic particularities and their contextualization in the intentional use of cultural space allows us to read them beyond iconography. The motifs variability in the petroglyphs of the province of Carchi, Ecuador, associated with the Pasto occupations (AD 750–1532), the seven altitudinal floors of the region, its hydrography and volcanoes, elucidate this intentionality. Therefore, through their regional sampling, and its subsequent multivariate analysis with the index as the semiotic component for the carved representations and the landscape as the unit of analysis; I seek to understand the petroglyphs beyond the icon and through their significance in human and nonhuman relationships.

Argoti Gómez, Juan [42] see Almeida, Martina

Argoti Gómez, Juan [18] see Astudillo, Fernando

Arguijo, Jennifer [118] see Perla Barrera, Divina

Arias Espinoza, Oscar (Universidad Nacional Mayor de San Marcos), Atsushi Yamamoto (Yamagata University) and Juan Pablo Vargas Díaz (Escuela Superior Politécnica del Litoral)

[299]

Entre dos frentes: Cerro Nاريو y Loma de Pinzhul durante el Periodo Formativo del Cañar, Ecuador

Nuestra exposición abordará la relación existente entre los sitios arqueológicos Cerro Nاريو y Loma de Pinzhul durante el Periodo Formativo Final (500-50 aC) de Ecuador. Proponemos que en esta sección del Cañar coexistieron ambos sitios como lugares ceremoniales que tenían relaciones de intercambio con varias regiones durante los siglos finales del formativo. Este planteamiento se sustenta en el análisis de la cerámica, la secuencia estratigráfica, los fechados de radiocarbono, la arquitectura y el estudio del paisaje formativo. Los resultados nos han permitido definir que entre el 500-50 aC ambos sitios funcionaron en paralelo, complementándose en el paisaje formativo del Cañar y desarrollando actividades ceremoniales semejantes. Asimismo, pudimos reconocer objetos cuya procedencia deriva de otras regiones de Ecuador y del norte del Perú.

Arias Espinoza, Oscar [27] see Alva Valverde, Giuseppe

Arias Espinoza, Oscar [27] see Lema, Veronica

Arias Espinoza, Oscar [161] see Yamamoto, Atsushi

Arief Drajat Priyatno, Andika [288] see Dilkes-Hall, India Ella

Arieta Baizabal, Virginia (Instituto de Antropología, Universidad Veracruzana), Judith Zurita Noguera (Instituto de Investigaciones Antropológicas) and Stacey Symonds (Patronato Museo Nacional de Antropología-México)

[309]

El legado de Ann Cyphers en la arqueología olmeca: Investigación y vinculación comunitaria

Los trabajos de Ann Cyphers (1950-2023) sobre los olmecas son uno de los legados de la arqueología olmeca, de Mesoamérica y del mundo. A raíz de su fallecimiento, es necesario un recuento de su producción académica. Esta ponencia analiza la obra de Cyphers respecto a sus principales temas, influencias,

aportaciones y retos en más de tres décadas de trabajo en la primera capital olmeca de San Lorenzo, Veracruz. Particularmente, se concentra en las contribuciones al conocimiento arqueológico y los planteamientos que causaron una irrupción al pensamiento disciplinar que enmarcaba los estudios en la costa del Golfo de México y que se observan a través de las líneas interdisciplinarias de investigación. Algunos temas son estudios sobre subsistencia, patrones de asentamiento, análisis escultórico, modos de vida, arquitectura, y viviendas, entre otros. Asimismo, y de manera trascendental, Ann Cyphers desempeñó un papel central en el desarrollo social del sur de Veracruz a través de la vinculación comunitaria reflejada en museos, un campamento para la investigación y formación de estudiantes, exposiciones y estrategias de comunicación para la salvaguarda del patrimonio arqueológico. El legado científico, cultural y social de Cyphers resulta inmensurable para comprender, en gran medida, a la más antigua sociedad de Mesoamérica.

Arinyo I Prats, Andreu (Aarhus University) and Debora Zurro (CSIC Milà i Fontanals)
[119]

Modeling the Use of Seaweed for Fire by Hunter-Gatherers in the Atacama Desert

The use of fire is essential for contemporary human populations. Yet the presence of an active population in the coastal Atacama desert, with limited land-based combustible, leaves us with the intriguing possibility that the ancestral inhabitants of this region used the abundant seaweed brought by the tides as a resource to sustain fires. To test this possibility, we introduce a simulation model consisting of three primary components: land-based combustible resource production, accumulation of combustibles along the seashore, and their consumption by human communities. The model proposes the use of a logistic law to describe how resources increase over time and provide a parameter range of consumption and use of each of the components that can be tested against empirical evidence.

Aristizabal Henao, Ana [130] see Conolly, James

Arkush, Elizabeth (University of Pittsburgh, Center for Comparative Archaeology)
[208]

Discussant

Arkush, Elizabeth [323] see Kohut, Lauren

Arkush, Elizabeth [26] see Smith, Ryan

Arkush, Elizabeth [277] see Snyder, Thomas

Armas-Quintana, Sara [245] see Fregel, Rosa

Armstrong, Travis
[305]

Research and/or Stewardship of Tribal Collections?

Research and/or stewardship? Native American cultural materials excavated or collected by archaeologists, particularly at research universities, have focused on Western-defined “scientific” and educational values of these collections. Tribal members increasingly are challenging such ideas. They dispute that items of their cultural heritage are primarily objects of value because academics can derive scientific data from them. Archaeologists are taught the physical object itself is less important than what the object may tell us about the past. The National Register of Historic Places reinforces such perspectives with the archaeological criterion focusing on the extractive value of sites yielding information. Data recovery at the expense of protection is mitigation in CRM undertakings. But universities and museums now must operate in a world in which collections, like exhibits, may be seen as a source of community relationships and engagement. Additionally, they must adapt to collections being highly regulated. In California, for example, reforms to CalNAGPRA emphasize

deference to tribal knowledge, potentially opening up the return of many collections that federal NAGPRA effectively excluded. As a member of a federally recognized tribe, RPA, former THPO and curator, I will discuss how tribal views of stewardship may alter the generations-accepted research paradigm.

Armstrong-Best, Nicole [88] see Montero, Laurene

Armstrong-Best, Nicole [102] see Vogel-Teeter, Lindsey

Armstrong-Fumero, Fernando (Smith College)

[83]

Discussant

Armstrong-Fumero, Fernando (Smith College)

[124]

Revenge of the Nerds, or Why Do Modern Archaeologists Identify with Early Antiquarians?

Laws for the preservation of tangible heritage posit historical and cultural significance as a form of intrinsic value that makes objects worth preserving. In the nineteenth century, arguments for this sort of preservation were meant to counteract vernacular practices that treated ancient ceramics or architectural remains as “mundane” objects that could legally be subjected to sale, manipulation, or destruction. Using a number of historical examples, this paper will trace how the figure of the eccentric and disdained antiquarian was used to articulate this preservationist principle in the first half of the nineteenth century. Though the legal principle of tangible heritage protection could be considered hegemonic today, the figure of the disdained antiquarian continues to figure in different performances through which heritage professionals legitimate state-sponsored preservation, even when this comes into conflict with the interests of indigenous descendant communities and other marginalized stakeholders. This disjuncture between the historical roots and contemporary realities of the heritage narrative provides a useful point of departure for rethinking core assumptions of preservation practices in the twenty-first century.

Arnold, Bettina (U. of Wisconsin-Milwaukee)

[330]

A Morbid Taste for Bones? Reconciling Science and Ethics in Mortuary Archaeology

Dead bodies are a source of a range of extreme emotions in human societies past and present, from superstitious fear of the dangerous dead (burials at cross-roads in medieval Germany) to ancestor veneration and the curation and display of skeletal remains (catacombs in Portugal, Italy, and other areas of Europe). However, the expectation that the dead, once buried, will be allowed to rest in peace is a comforting fiction, as archaeologists working in CRM or heritage management know only too well. Most members of the public are unaware that the dead far outnumber the living, making their eventual disturbance due to human activity, such as urban sprawl or industrial development, and natural forces, such as coastal or riverine erosion, virtually assured. Archaeologists serve as one of the few buffers between the random and violent destruction of such remains, as often happened in the past, and their careful recovery and respectful analysis. Pat Richards has spent the better part of her professional career dealing with the tension between the public perception of mortuary archaeology and its practical reality. This paper will unpack the challenges of engaging in mortuary archaeology in an increasingly politically motivated anti-science ecosystem with global reach.

Arnold, Philip (Loyola University Chicago)

[163]

Discussant

[163]

Chair

Arnold, Philip (Loyola University Chicago)**[216]***El juego de pelota y el juego político en Teotepac, el sur de Veracruz, México*

Aunque se considera un pilar del periodo clásico de Veracruz, el juego de pelota mesoamericano está poco documentado en la Sierra de los Tuxtlas del sur de Veracruz, México. Si bien se han identificado las canchas del juego, el conjunto de actividades que se organizan en esos lugares aún no se ha estudiado lo suficiente. Esta presentación informa sobre los juegos de pelota relacionados con el sitio de Teotepac, ubicado a las orillas del lago de Catemaco en el centro de Tuxtlas. Estos datos incluyen información sobre patrones de asentamiento dentro del sitio, prospección geofísica y el análisis de un contexto de banquete asociado con una cancha del juego. Esta última información proporciona una idea de las funciones políticas que pueden haber constituido parte de los rituales del juego de pelota. Específicamente, se argumenta que ciertos artefactos, como la cerámica policroma, ofrecieron un mecanismo mediante el cual los participantes de Teotepac afirmaron su identidad regional. En conjunto, estos diversos grupos de datos indican la importante función política, así como ideológica, del juego de pelota en el sur de Veracruz.

Arnold, Philip [216] see Venter, Marcie

Arnold, Philip [163] see Wilson, Nathan

Arnott, Sigrid (Self-employed) and David Maki (Archaeo-Physics LLC)**[153]***Women's Portages: Colonial Encounters, Gender, and Indigenous Worldview in the Great Lakes*

Dakota and then Anishinaabeg women were central figures in water-based travel cycles in an annual round directed by plant, animal, and river relations within the Woodland Tradition. Portages, including Women's Portages, are material records of Indigenous women's labor before, during, and after the Fur Trade in the Great Lakes. The Northwest Trail and its environs, preserve a linkage of portages, poses, food sources, and waterways used by Indigenous travelers long before European contact. The trail was then shared with the colonial explorers and traders after contact. Recent research regarding gendered labor and Indigenous ontologies at this portage landscape reveal how colonial source materials and perspectives have biased archaeological interpretations of sites linked to portaging. Sources, including archaeology, show that, despite destructive changes wrought by these colonial forces, there is also ample evidence of Indigenous survivance.

Arnott, Sigrid (Self-employed)**[196]***Discussant***Arose, Helena (The Antiquities Coalition)****[180]***Moderator*

Arredondo Leiva, Ernesto [309] see Barrientos, Tomas

Arroyo, Barbara (Museo Popol Vuh, Universidad Francisco Marroquín, Guatemala), Felipe Trabanino (Universidad Nacional Autónoma de México), Eleanora Reber (University of North Carolina, Wilmington) and David Lentz (University of Cincinnati)**[128]***Agricultural Diversity in Kaminaljuyu, Guatemala: New Ideas on Environmental Resources*

Investigations carried out in recent years in various sectors of the Kaminaljuyu site have revealed relevant aspects of the use of local plants, their control, and distribution. Analysis of residues in ceramics allows us to know some data. Although the conservation of these remains is very precarious, it has been possible to find a

relevant corpus to discover novel uses of remains that had not appeared in the archaeological record of the past. There are some representations of plants in ceramics and in the iconography of the site that confirm the data of the organic remains recovered. Despite the problems with conservation, some of these resources are found in elite contexts, allowing us to know the interaction of the plant world with social groups of higher strata. Examples of various plants illustrating their uses in ritual contexts have also been identified. However, much remains to be known to systematically establish changes in the landscape over time. This is an initial and ongoing study that will offer a glimpse of the plants and vegetation of the ancient society of Kaminaljuyu.

Arroyo, Valerie (Trinity University), Jonathan Bethard (University of South Florida), Andre Gociar (Archaeotek), Zsolt Nyárádi (Haaz Rezso Muzeum) and Jennifer Mathews (Trinity University)

[68]

How the Skeletal Remains of Romanian Reflect the Culture and Daily Life of the Medieval Period

Medieval Romania's history is riddled with gaps caused by destructive invasions against the Ottoman Empire, among others. With a fractured and understudied history, bioarchaeology emerges as a potent tool to unveil the concealed facets of this era, ranging from dietary habits and religious inclinations to vocational pursuits, physical traumas, and burial customs. Existing literature on Romanian excavations and osteological analysis indicates trends such as grain-rich diets, livelihoods in farming, blacksmithing, and craftsmanship, invasion-related trauma, and Christian Orthodox burial norms (such as heads facing west and feet toward the east), and social stature dictating burial proximity to churches. An analysis of a burial excavated at the site of Papdomb in Valeni, Romania reveals congruence with these anticipated religious burial practices. However, intriguingly, our excavations unveiled an unexpected facet: the prevalence of familial or multi-individual burials when single burials have been highlighted in the academic literature as the norm. This poster will examine the practice of multi-individual burials, and what this tradition reveals about life and death in Medieval Romania.

Arroyo-Cabrales, Joaquín [75] see Martinez, Patricia

Arsuaga, Juan Luis [25] see Baquedano, Enrique

Arthur, John (University of South Florida, St. Petersburg)

[132]

Discussant

Arzarello, Marta (Università degli Studi di Ferrara)

[126]

Short Reduction Sequences at the First European Peopling: An Example of Expedient Technology?

The early European peopling (about 1.5 Ma) is characterized by a low number of sites and lithic assemblages often consisting of a few hundred pieces. Despite these limitations, it is possible to define the technical behavior of these early Europeans with sufficient accuracy. The reduction sequences are always short and mainly aimed at the production of flakes that are very rarely retouched. Shaping is not always present, especially in cases in which the only raw material exploited is flint. In this context, the Pirro Nord site (Apricena, FG) represents an important example that provides interesting insights into early European lithic production.

Arzarello, Marta [157] see Arce Buitargo, Tomas

Asch, David [204] see Asch Sidell, Nancy

Asch Sidell, Nancy and David Asch**[204]***Archaeobotany of the Lower Illinois Valley: The Legacy of Stuart Struever*

In 1960 Stuart Struever initiated an “Illinois Valley Archaeological Program” and devoted his research over the next decade to study of Middle Western Hopewell manifestations. He set out to test a hypothesis that the adoption of a simple mudflat agriculture conducted on raw soils of large-valley floodplains promoted more productive subsistence economies and contributed to population expansion and to emergence of Hopewell. Struever came to favor an alternative hypothesis that Intensive Harvest Collecting of multiple natural resources upgraded the Middle Woodland subsistence base. Whether or not seeds of floodplain pioneers were cultivated remained an open question. Outstanding among Struever’s accomplishments was his development of flotation as a practical method for recovering plant charcoal. By 1969 when excavations began at the Koster site, Struever was committed to collecting flotation samples from every provenience. Effectively, the CAA Archeobotanical Laboratory, which was established in 1970, studied flotation-recovered plant materials from 30 habitation components that were excavated from 1960 to 1980. These components span a time of hunter-gatherers entirely dependent on wild foods, a time when fires perhaps were employed to manage the landscape, and several millennia of developing plant cultivation and domestication.

Asencio, Julio [212] see Sutter, Richard

Ashby, Emma**[202]***Understanding the Transition to Villages: A Comparison of Maize between Basketmaker III Sites and an Early Pueblo I Village*

Comparative morphological and other analysis on maize samples informs us of crucial nutritional changes in key Ancestral Puebloan cultural stages. The transition of the Basketmaker III (500–750 CE) period to the Pueblo I (750–950 CE) period in the southwestern Utah archaeological record is marked by distinct technological changes and larger, more densely populated and permanent villages. This increased population density necessitated the cultivation and growth of a stable food supply. Maize, a staple of Puebloan diet throughout both periods, is known for its genetic plasticity; thus allowing farmers to select for traits adaptive to their needs. In this study I compare burned maize from Basketmaker III sites in Montezuma Canyon to maize from an early Pueblo I village site (749–772 CE) located on the plateau above to ascertain if and in what ways maize changed as a part of this societal shift.

Ashford Privette, Cameron [68] see Silva Carvalho, Carlos

Ashley, Keith [121] see Johns, Sherman

Ashley, Michael (Codifi LLC)**[293]***Reflections on 30 Years of Digital Archaeology: Where Do We Go from Here?*

Over the past three decades, archaeology has experienced a paradigm shift with the integration of digital recording and publishing methodologies. This “paper” critically examines whether, in our pursuit of technological advancements, we have remained true to the core principles of archaeological ethics. Are we on the brink of a digital dark age, or are we already in one? Through conversations with eminent scholars from the archaeological community, tech industry experts, and representatives from cultural memory institutions, we unravel the journey from a digitally focused archaeological approach to a more holistic practice. As we strategize for the upcoming 30 years, the emphasis is placed on the dual objectives of the discipline: ensuring the creation of a durable archaeological record that stands the test of time, while simultaneously harnessing the full

potential of modern technology. To assure our practices not only produce records that will benefit future generations but also leverage the capabilities of digital technology, this discussion serves as a clarion call to professional archaeologists, urging us to reflect, adapt, and innovate for a sustainable future in archaeology.

Assaf Shpayer, Ella (Tel-Aviv University)

[25]

Horse Mandibles in the Paleolithic as Liminal Bodies

The deep bond between humans and horses is well reflected in the Paleolithic record from its earliest stages. The significant role of horses (*Equus*) in Paleolithic diet is evident from the presence of horse skeletal remains, and specifically mandibles and teeth, at multiple Lower Paleolithic sites worldwide—and for a good reason. Horse marrow has a unique nutritional profile superior to that of most other ungulates. Later, simultaneously with a sharp increase in the presence of horses at Upper Paleolithic European sites, it is the animal most commonly depicted. The horse head was given special focus, as were mandibles, tongue bones, and teeth. Among non-WEIRD societies, the responsibility to create “trust” and “reciprocity” often includes special treatment of prey remains, especially skulls. Moreover, mandibles and teeth specifically bear liminal qualities. Horses represent ideal shamanistic totems and liminal agents on account of their ability to travel distances, necessary for communicating with entities in other worlds. I argue that these Upper Paleolithic practices highlight the importance early humans attributed to horse skulls and mandibles as liminal bodies, a relationship whose roots lie in the Lower Paleolithic and perhaps in the unique nutritional role horse mandibles played in early human diet.

Assefa, Sewasew [190] see Szymanski, Ryan

Astudillo, Fernando (Universidad San Francisco de Quito), Martina Almeida (Universidad San Francisco de Quito) and Juan Argoti Gómez (Universidad San Francisco de Quito)

[18]

World War II Archaeology in the Galápagos Islands: The Soldiers and Convicts at the Wall of Tears (1940–1959)

During the early years of World War II, the US government began actions to protect one of its most important investments in America, the Panama Canal. During the late 1930s, the US Navy and Army built several military bases along the Pacific coast of Central and South America to defend the canal zone. The Galápagos Islands were selected to build a military base, considering the strategic position between Panama and the Gulf of Guayaquil. The Baltra Beta Base started operations in 1942 and radar was an important technology implemented in the Galápagos to detect possible air attacks from the west. Several radar stations were built in the archipelago, mainly on Isabela Island. After the war, the Cerro Orquilla radar station was abandoned and re-occupied by the government of Ecuador to hold a penal colony. Today, the remains of these institutions are a touristic place known as the Wall of Tears. In this talk, we present the results of the Summer 2023 archaeological survey of the site, which was focused on exploring the layouts of the institutions, the domestic activities, and the possible ecological impacts caused by the male population that occupied both the radar station and the penal colony.

Astudillo, Fernando [42] see Almeida, Martina

Athanasoulis, Demetrios [191] see Manquen, Brody

Athens, J. (International Archaeological Research Institute Inc.)

[220]

Karanki Monuments of Northern Highland Ecuador: A Cultural History in Peril

The inter-Andean landscape of northern highlands Ecuador, including the western upper montaña region, is

dotted with clusters of large earthen mounds, many of monumental proportions that reach over 100 m on a side, 15 m in elevation, and have long ramps extending 150 m or more from their platforms. These sites are the legacy of the Karanki culture, which thrived between AD 1250 and about AD 1500. The Karankis met their demise with the Inka conquest, which soon after met its own demise with the arrival of the Spanish in 1534. Little is known from historical sources about the Karanki. In recent times, intensive archaeological studies have been carried out at several sites, but because of the monumental scale of these sites, this work can only be described as limited. This paper focuses on the sad fact that monumental Karanki sites, as extraordinary as they are, are rapidly disappearing from the landscape. In this sense, the Karanki culture is being steadily erased from history. What should be a proud reminder on the landscape of Ecuador's indigenous past is in danger of becoming but a footnote in Ecuador's cultural patrimony. This paper documents the ongoing destruction of Karanki monuments.

Atherton, Heather [269] see Harvey, Amanda

Atkinson, Cory [224] see Pisanelli, Brenna

Atkinson, Stephen [154] see Cranford, David

Atudorei, Viorel [194] see Ray, Erin

Au, Ari [68] see Savoy, Megan

Auge, C Riley (University of Montana)

[333]

Taking Sides: Left and Right Concepts in the Enactment of Magic

Magic is essentially performative and heavily ritualized in its enactment whether wielded by specialized (e.g., shamans, cunning folk, alchemists) or lay practitioners. Each detail of the ritual performance not only works in tandem with all other aspects, but the details simultaneously connect with and draw on cosmic forces as the agentic energy that empowers the magic. Frequently, deeply embedded associations of directionality, especially left and right positioning and movement, are integral to the magical rite's efficacy. Using a specified hand with which to pick magical plants, to touch ailing or possessed patients, or to handle magical objects is often required as part of the ritual protocol as the left or right hands themselves are imbued with positive or negative energy. Movement throughout the ritual in clockwise (right-wise) or counterclockwise (left-wise) direction around features, elements, and subjects also allies the ritual with celestial cosmic movement. This paper will illustrate how crucial it is for archaeologists to understand the often invisible, but critically important, role left and right play in the physical enactment of magical rites and how we might endeavor to make the invisible, visible.

Austin, Summer (University College London)

[38]

Tut on Tour: Thirty Years of Demand Creation through Exhibition

This study is a multidisciplinary investigation into factors that create, enhance, and normalize demand for collecting antiquities. Using the original blockbuster, *Treasures of Tutankhamun*, as the case study, this doctoral research investigates the correlating antiquities markets' reaction to Tut blockbusters by gathering, quantifying, and contextualizing 30 years of exhibition and antiquities market data. The market for illicit Egyptian antiquities is a demand-driven economic system predicated on collectors and museums acquiring antiquities; thus, we must understand what influences demand for antiquities. Drawing on primary sources

coupled with archaeological, economic, museological, and criminological theory, this research addresses the assumption that blockbuster exhibitions influence demand in the antiquities market. Anecdotal evidence cited in news articles and single-auction evidence in academic journals make up the totality of evidence for this assumption; thus, this research addresses a pivotal gap concerning causality between museums, the market, and the illicit trade. By identifying and understanding trends related to blockbuster exhibitions and collecting, the objective of this study is to introduce reliable data to the crucial debate concerning the relationship between museum blockbuster exhibitions, end-market demand, and the illicit antiquities trade. The results illustrate an instantaneous and intense demand for ancient Egyptian material on the market when tut tours.

Austvoll, Knut Ivar (University of Oslo)

[298]

Schismogenesis on the Scandinavian Peninsula during the Late Neolithic Transition

A pungent statement in *The Dawn of Everything* is that the enormous diversity in hunter-gatherer societies makes it impossible to talk about one transition to agriculture. There are several consequences to this statement. One is that hunter-gatherers did not wait for an inevitable revolution, and another is that the agricultural turn was all but one-sided. A theoretical premise used by the authors in several parts of their book to make sense of this is schismogenesis. The concept, originally framed by Gregory Bateson, is used to understand how groups have a tendency to identify themselves against others and adapt their own unique take on external elements. In this paper this concept of schismogenesis will be explored and adapted in a region on the edge of northern Europe to understand the agricultural turn. The change has been presented as a slow, drawn-out process until it suddenly changed around the turn to the Late Neolithic (ca. 2350 BCE). The archaeological evidence is here presented with the concept of schismogenesis in mind, arguing that resistance and adaptation created a unique agropastoral system that was highly impervious and dynamic to the local ecology.

Auzina, Dita (Bonn University)

[296]

Chair

Auzina, Dita (Bonn University)

[296]

Monumentality by Communities: Case Study of the Caribbean Coast of Nicaragua

Large stone and earth mounds of Cascal de Flor de Pino in the Caribbean of Nicaragua, which were built between 4 BC and AD 9, are unique in the region and have been suggested as a sign of social stratification and inequality. Indeed, reaching more than 30 m in diameter and 3 m in height, Cascal de Flor de Pino significantly differs from other sites in the region, which are marked by surface collections of ceramic and lithic, shell middens, and occasionally just a few decimeters high earthen mounds. To understand if these monumental structures represent social hierarchies, the access to resources such as ceramics, lithics, and foodways from monumental and non-monumental sites is analyzed. Based on the data, it is suggested that monumentality in the Caribbean of Nicaragua can rather be seen as a result of human interaction with the landscape than social stratification among human societies.

Avila Peltroche, Mary Claudia [27] see Alva Valverde, Giuseppe

Aviles, Astrid [75] see Sanchez Miranda, Guadalupe

Awe, Jaime

[251]

Chair

Awe, Jaime, Arlen Chase (University of Houston) and Diane Chase (University of Houston)
[251]

Light Comes from the East: The Archaeology of Belize in Historical Context

For more than a century, archaeological research in Belize has been at the vanguard of Maya Studies, contributing disproportionately to our knowledge of ancient Maya civilization. Yet, Belize's archaeological contributions to the field are often overlooked in many current synthetic statements on the ancient Maya. Research in Belize pioneered the application of settlement pattern studies and also witnessed the initial use of large-scale lidar, building on archaeological data that suggested the need for different organizational models for the past. In fact, Belizean lidar has undergirded new formulations and models concerning Mesoamerican settlements, urbanism, and landscape modification. Archaeological research in Belize has also led the way in studies focusing on Preceramic occupation, human ecology, the rise of cultural complexity, cave research, coastal adaptations, the Postclassic and Historic period Maya, aDNA, and climate change; this research has additionally shed new light on the transformation of ancient Maya civilization from the Classic to Postclassic periods. In this presentation, we discuss these considerable accomplishments and further highlight many other significant contributions that archaeological investigations in Belize have made to our understanding of the Maya past.

Awe, Jaime [251] see Ebert, Claire

Awe, Jaime [99] see Lewis, Abigail

Awe, Jaime [251] see Moyes, Holley

Awe, Jaime [199] see Smith, Audrey

Awe, Jaime [266] see Suarez, Nicholas

Awe, Jaime [197] see Tejeda-Barillas, Lilian

Awe, Jaime [34] see Tzib, Frank

Awe, Jaime [98] see Walden, John

Axelrod, Ella [105] see Belcher, William

Ayala, Patricia
[124]

Disputes over Ancestors: Between Atacameño Discourse and Authorized Heritage

Since the nineteenth century, the inhabitants of the Atacama Desert have coexisted with collecting, heritage, and museum practices. Since the late twentieth century, Atacama communities have confronted archaeology and museums over the significance, ownership, and rights over the bodies of their ancestors that were taken to national and international museums. The Indigenous demands for a respectful treatment of human bodies in Chile show the need for a repatriation law and professional codes of ethics that integrate these populations. Likewise, conflicts over ancestors have reaffirmed differences between local knowledge and constructions and the authorized heritage discourse. We will present the progress of a research project focused on collecting, patrimonialization, and repatriation in the Atacameño territory.

Ayala, Patricia [124] see Jaimes Betancourt, Carla

Ayala, Sergio [9] see Lohse, Jon

Ayers-Rigsby, Sara (Florida Public Archaeology Network)
[64]

Discussant

Ayers-Rigsby, Sara (Florida Public Archaeology Network), Jeff Ransom (Miami Dade County) and Malachi Fenn (FPAN/Florida Atlantic University)

[229]

Building a Case for Resilience: A Call to Action

South Florida contains a vast record of over 10,000 years of human occupation. The archaeological timeline of the area has the capability to demonstrate human adaptation to rapid climate change in the past during the transition from the Younger Dryas to the Holocene. As archaeologists, we have a professional imperative to highlight the long human history in South Florida and use it to address modern climate change. With each site threatened and then destroyed by development, climate change, or other causes, we lose our ability to share that narrative and inspire hope for modern Floridians. This paper will assess work completed in the area, why the threats from climate change cannot be ignored by archaeologists, and how we must engage in climate action to prepare for a better future.

Ayers-Rigsby, Sara [312] see Shriver-Rice, Meryl

Ayling, Melissa (Simon Fraser University)

[294]

Community-Based Ethnoarchaeology to Inform Experimental Archaeological Research: Learning from the Diasporic Tigrayan Community in Vancouver, British Columbia

Experimental archaeology is an extremely beneficial method of inquiry, as it centralizes the physical knowledge of material culture and sensory experiences. While experimental archaeology brings researchers closer to the realities of creating and using material culture, ethnoarchaeology reconnects researchers with people, reducing the distance between archaeologists and their subjects of study. Ethnoarchaeology also fosters connections between researchers and communities, improving research directions and questions, increasing relevancy to communities, and pushing results into more public spaces. The people of Tigray, Ethiopia are a culturally distinct ethnic group inhabiting the northern highlands. Despite deep temporal occupation, the area has recently been inaccessible to researchers due to ongoing political unrest in the region. However, Tigrayan communities in the diaspora maintain strong cultural ties and therefore valuable traditional knowledge. Using community-based ethnoarchaeology, the documentation of traditional knowledge guides experiments that aim to further our understanding of the use of indigenous African grains in traditional beer and brewing practices and aid their archaeological identification. Scientific experiments grounded by a firm foundation in the community contribute to the educational outreach of this research to the wider community while simultaneously benefiting archaeological investigations in the region.

Azevedo, Terry

[249]

Fish, Fishing, and Ecological Resilience along the Big Sur Coast of California

Along the Big Sur coastline, the Salinan and Esselen relied on a relatively consistent repertoire of small and medium-bodied fish species for at least 6,000 years. Decades of systematic excavations have identified the importance of fish, although we are still gathering data on temporal and spatial trends in varying ecological circumstances. Marine fish recovered from archaeological sites CA-MNT-1951 and CA-MNT-255, marine biology data, and intertidal foraging experiments contribute to our understanding of fish and fishing practices during the Early (5500–2600 cal BP) and Middle (2600–1000 cal BP) periods. Fish within four species dominate the collections: surfperches caught with nets, rockfish and cabezon amendable to individual hook and line capture, and pricklebacks by hand. These species dominate the archaeological record along the Big Sur and central California Coast. All represented fish could have been procured from the near shore waters of rocky intertidal, kelp forest, and tide pole habitats. The significant continuity in fish species caught through time—with no compelling evidence for depression of prehistoric fisheries or intensified fishing practices or technologies—reflects the abundance and resilience of fish in this productive marine ecosystem.

Azevedo, Terry**[274]***Discussant***Bacha, Henry****[37]***Chair***Bacha, Henry****[37]***Materializing Inka-Colla Interaction in the Colonial Viceroyalty of Peru*

This paper engages as its central problematic a recurrent iconographic motif—identified by scholars as depicting a ritualized drinking encounter between the Sapa Inka and his Colla (an ethnic polity of the Late Intermediate period Lake Titicaca basin) counterpart—painted on *keros* (Andean ceremonial drinking vessels) produced in the colonial Viceroyalty of Peru during the seventeenth and eighteenth centuries. This depiction of a peaceful interaction between the Inka sovereign and an evidently analogously powerful Colla monarch contrasts with historical accounts of Inka military conquests of a resistant altiplano; and archaeological evidence suggesting that the political landscape of the late pre-Inka Collao was characterized by fragmentation rather than by unification under a Colla state. Integrating iconographic analysis, ethnohistorical data from sixteenth- and seventeenth-century *crónicas* and *visitas*, and a synthesis of previous archaeological data from the historic Colla heartland, this paper interrogates the implications of such a depiction of Inka-Colla interaction in the early to mid-colonial Andes. Ultimately, it proposes that the iconographic motif served a performative function, alternately (and perhaps simultaneously) insisting on the equivalence of the historic Colla *señoríos* to the Inka in terms of sociopolitical sophistication complexity and asserting the essential benevolence of Inka rule and imperial expansion.

Bacha-Garza, Roseann [45] see Skowronek, Russell

Bachir Bacha Llanos, Aïcha (EHESS, Mondes Américains)**[299]***Paracas Medio en el valle bajo de Ica, una perspectiva desde el sitio arqueológico Ánimas Bajas*

Poco sabemos sobre la vida de las entidades sociopolíticas que ocuparon el valle de Ica durante el Horizonte Temprano, en la época conocida como Paracas Medio (500-300 aC). Por ello, en esta conferencia se presentan y discuten los resultados del análisis de la cultura material hallada en Ánimas Bajas, sitio ubicado en la cuenca de Callango, valle bajo de Ica, en la costa sur del Perú. A partir de la reconstrucción de las etapas constructivas —con sus materiales culturales asociados— de un edificio cívico-ceremonial y de un contexto funerario que contenía fardos y cabezas ofrendas/trofeo, se pretende: (1) aprehender aspectos sociales, político-religiosos y económicos de las entidades que ocuparon el sitio; (2) entender el lugar que ocupaban los paracas del valle bajo de Ica en este periodo, tanto en la costa sur en particular, como en los Andes en general. Nos preguntamos si con estos nuevos datos aún se puede seguir calificando a la costa sur como un área retrasada en comparación con la esfera cultural de la costa norte y si era periférica a las dinámicas y el panorama de intensificación del intercambio y la migración que conoció los Andes en este periodo.

Backe, Karen [312] see Shriver-Rice, Meryl

Backs, Haylee (Boston University) and Laura Masur (The Catholic University of America)**[268]***Domestic Animal Use at St. Inigoes Jesuit Plantation*

Plantations in the Southern United States functioned on a system of power over enslaved Africans that is

reflected in the material culture of daily life. Zooarchaeological analysis of the fauna from St. Inigoes plantation in St. Mary's County Maryland provides insight into what everybody on the plantation was eating, and the work enslaved peoples performed to process the animals consumed. Through analysis of animal species and the abundance of skeletal parts present on the plantation, the subsistence strategies of the White population as well as the enslaved can be deduced. Understanding what enslaved peoples were eating provides insight into the activities of enslaved peoples beyond their labor, particularly how they were using the knowledge of the plantation to provide for themselves and their families. Additionally, understanding the subsistence patterns of enslaved peoples contributes to understanding the foodways of the Black community today and how their food is connected to the perseverance of their ancestors.

Bacon, James (Trent University)

[198]

A Mound or Not a Mound? How Rasters and Point Clouds Can Help with False Positive Identification

This poster will discuss the benefits of using different combinations of rasters for large-scale survey and the functional usage of viewing problematic mounds in the point cloud to weed away the false positives. Maya sites around Mesoamerica have and will be scanned with lidar. Since the turn of the century, technology has improved and now the data collected is higher resolution but also more sensitive to smaller height changes. As a result, it has become both easier and harder to identify Maya mounds. Smaller mounds are more likely to be identifiable in the data, but extra features that look like mounds (false positives) will also be found which only ground truthing can weed out. Many interpretations of lidar have focused on various combinations of images and visualizations (raster images). On their own, these are limiting for verifying problematic mounds because they are dependent on the ground classification (input by the researcher/software). Instead, viewing the equivalent raw data, as the point cloud, rather than a generalized surface, provides greater clarity to check and differentiate between potential mounds and false positives, because there is less generalization.

Bacon, James [321] see Gonzalez Esteban, Cristina

Baconnet, Benoît (Université Paris I Panthéon-Sorbonne, ArchAm)

[78]

The Río Bec Tradition in the Bajo el Laberinto Region: Preliminary Results

Located on the border between the central and northern lowlands, the Río Bec region developed a singular architecture and iconography from the sixth century. In the eighth century, the Central Lowlands underwent major sociopolitical transformations, such as the gradual fall of the Kaan dynasty and the loss of Calakmul's hegemony, resulting in increased mobility of populations and ideas. From the second half of the eighth century, some sites in the Bajo el Laberinto Region adopted architectural and iconographic features of the Río Bec tradition. Since 2020, a doctoral thesis, in correlation with the Río Bec 2 project, aims to reference and study these elements in order to contribute to a more precise definition of the Río Bec phenomenon, measure its influence in space and time and characterize its interregional relations. Bibliographical research, coupled with prospections and in situ analyses carried out during the 2022 and 2023 seasons, highlighted various themes and qualities of realization, suggesting different modes of transmission according to the sites. This presentation aims to present the preliminary results obtained at the sites of Calakmul, Olvidado, and Pared de los Reyes.

Bader, Alyssa (McGill University)

[143]

Moderator

[143]

Discussant

Bader, Gregor [42] see Mahan, Samantha

Badetti, Elena [12] see Longo, Laura

Badetti, Elena [12] see Sorrentino, Giusi

Badilla, Adrian (Museo Nacional de Costa Rica) and Francisco Corrales-Ulloa (Museo Nacional de Costa Rica)
[222]

Archaeological Sites and Flooding in the Diquís Delta, Southeastern Costa Rica

The interaction between ancient societies and their natural environment was one of the topics discussed by Richard G. Cooke for southern Central America. We focus on the Diquís Delta, Costa Rica, an alluvial plain formed by the Térraba and Sierpe Rivers, with an annual rainfall ranging between 2,840 and 6,840 mm, subject to strong cyclical flooding, that have caused the deposit of sediments. Precolumbian occupations have been documented in the delta since at least 300 BC until the sixteenth century. Although the delta presented many environmental challenges, it also provided abundant cultivable land, an extensive mangrove swamp, proximity to various sources of raw materials, and a strategic position on communication routes. This led to the establishment of important population centers and the construction of various architectural clusters with units up to 1.4 m high that could serve as the basis for buildings of a public nature or residence of the leaders. These in turn could serve as shelter during floods. The results of archaeological investigations carried out at various sites located at 10 m asl and how these natural phenomena could affect village life, circulation of goods, places of memory, and generate settlements abandonment and reoccupation are presented.

Badillo, Alex [43] see Sindors, Elizabeth

Badillo, Melissa [251] see Chase, Diane

Baer, Kelly (Northern Arizona University)
[181]

Discussant

Baer, Kelly (Northern Arizona University)
[321]

Adapting Photogrammetry and 3D Modeling Beyond Archaeological Recordation for Use in Public Education

The expansion of digital technology has allowed archaeologists to quickly adopt new techniques and digital tools for use in the field. From the early days of analog recording and hand-drawn maps to contemporary tools like photogrammetry and 3D modeling, the rapid evolution of technology has led to greater accuracy and efficiency when collecting and processing data. For this reason, archaeology students today are expected to be familiar with digital technology and to refine their technical skills over the course of their studies. But with greater efficiency in the field also comes the responsibility to disseminate information effectively. Here, I present a case study of photogrammetry for public archaeology at the site of Xunantunich in western Belize. Using a tablet, DSLR camera, and a tripod, digital teaching models of 14 structures within the site core were created and designed primarily for use by local tour guides. The goal of this project was to open new avenues for public archaeology and better serve the local and Indigenous communities in which archaeologists work. This pilot project serves as evidence that by using digital techniques like 3D modeling and photogrammetry, archaeologists can simultaneously collect data while also preparing accessible learning materials for the public.

Báez Santos, Laura [158] see Aldana Mendoza, Jesús Alberto

Bagwell, Elizabeth (Piñon Heritage Solutions)**[66]***Discussant***Bain, Allison (Université Laval, Québec, Canada)****[148]***Colonial Period Occupations and Historical Archaeology on Barbuda*

A variety of colonial period structures are scattered across the island of Barbuda. Spanning the seventeenth to nineteenth centuries, they include wells, lime kilns, a Martello Tower, as well as the remains of a dozen buildings at the Highland House site, among others. While many sites have been documented, excavations have been limited to only the Castle site located in Codrington Village and Highland House. The Castle site was initially a guarded storehouse and residence, while Highland House was a purpose-built retirement home and private game park, and later served as an administrative center. Whether scattered in the bush or on coastal roads, all of the island's colonial period heritage is facing the combined risks of encroaching development and climate change. This paper proposes an overview of the different phases of colonial period occupation and archaeology and highlights the necessity for further documentation.

Bain, Allison [148] see Richards-Rissetto, Heather

Bair, Andrew (Harvard University)**[91]***Medieval Archaeology as Historical Archaeology, or Why Anthropological Archaeologists Should Take the European Middle Ages Seriously*

Though by strict definition the study of any literate society might be considered “historical archaeology,” in practice American historical archaeologists largely focus on the centuries after 1492—in other words, the archaeology of the modern world. But modernity was not immaculately conceived; the themes, things, and questions that characterize historical archaeology find origins in the long and heterogenous European medieval period. This paper presents an argument for placing the Middle Ages within the framework of historical archaeology, the case here being the study of colonialism. While Europe would later become colonizer of the globe, it was the product first of its own internal and diverse varieties of medieval colonialism. In appreciating the complexity of colonial experience from the archaeology of medieval Ireland and Wales, Central and Northern Europe, Iberia, and the Levant, we can catch a glimpse at the genealogy of modern colonialism, better informing and contextualizing more contemporary material cultures and mentalités of great interest to historical archaeologists.

Bair, Daniel (University of Puerto Rico, Mayaguez) and Richard Terry (Brigham Young University)**[213]***Geochemical Analysis of Plaza Floors in the Three Rivers Region of Northwestern Belize*

Ancient markets are difficult to identify as most utilitarian items and consumables were perishable. Our objective was to use geochemical analyses of extractable phosphorus and metallic residues in soils to distinguish the unique geochemical patterns of market plazas from other types of plazas from sites within the Three Rivers Region of Northwestern Belize. We present preliminary data from the 2023 field season.

Baires, Sarah**[331]***Discussant***[82]***Chair*

Baires, Sarah**[155]***Vibrancy of Place and Cahokia's Emergence*

The city of Cahokia sits in a landscape occupied by bodies of water, distinctive biota, and unique stone and mineral deposits. This flood plain landscape of the Mississippi River served for millennia as home to Indigenous peoples who lived in semi sedentary communities while participating in small-scale agriculture, hunting, and gathering. Cahokia and its sister boroughs of East St. Louis and St. Louis, along with farmsteads and villages located in the Richland Uplands to the east, emerged ca. AD 1050 taking shape rapidly marked by organized mounds, plazas, neighborhoods, and farming communities. In this paper I examine both the constructed and non-anthropogenic landscapes of Cahokia focusing on the intersection between the human and other-than-human realms that created this city. Particularly I emphasize the ways monumental places structured and integrated the neighborhoods and the surrounding environs into the city.

Baires, Sarah [82] see Buchanan, Meghan

Baisan, Christopher [176] see Larrick, Dakota

Baisden, Rebecca**[269]***Small Sites and Big Assumptions: Questioning the Uncritical use of "Field House" to Classify Small Precontact Structures on South Cat Mesa of the Jemez Ranger District*

Small precontact structures throughout the Southwest that lie on the periphery of large village sites are often classified as "field houses", a term that carries with it the assumption that these structures were utilized seasonally, occupied for a short duration of time, and whose function is tied to agricultural practices. The uncritical and widespread use of this classification without consideration of the entire artifact assemblage may skew archaeological interpretations of land use, demography, and settlement patterns. This paper examines field houses on South Cat Mesa of the Jemez Ranger District to answer whether the broad and uncritical use of this term to describe small precontact structures assumes a singular function when they may have served more than one purpose. To test this idea attributes drawn from previous research were analyzed for 131 field house sites including method of construction, presence and frequency of extramural features, assemblage size, ceramic types present, and flaked and ground stone. This study shows that there is variability in sites classified as "field houses" on South Cat Mesa suggesting that some may have been used more intensively, occupied for longer periods of time, reoccupied repeatedly through time, or had other functions.

Baitzel, Sarah [70] see Bey, Bridget

Baitzel, Sarah [223] see Diaz, Lucia

Baitzel, Sarah [50] see Rivera I., Arturo

Baka, Abby (University of Utah)**[20]***Chair*

Baka, Abby (University of Utah), Kenneth Vernon (University of Colorado, Boulder), Madeline Mackie (Weber State University), Jerry Spangler (Colorado Plateau Archaeological Alliance) and Alexandra Greenwald (University of Utah, Natural History Museum of Utah)

[20]*Exploring the Pleistocene-Holocene Transition Archaeological Record on the Colorado Plateau*

The Pleistocene-Holocene transition (PHT) archaeological record on the Colorado Plateau is notably sparse, especially when compared to the surrounding Great Basin, Rocky Mountain, and Plains regions. Whether this

dearth is due to low human populations in the region during the PHT, or due to insufficient fieldwork targeting PHT archaeological resources, is unclear. To address this uncertainty, we used a random forest model to determine which areas of southern Utah had high potential for PHT-aged archaeological sites based on the location of known PHT sites and several environmental variables. A cluster of high-potential areas in the San Rafael Desert, Emery County, UT, was selected for pedestrian survey during the 2023 and 2024 field seasons. We present the results of the 2023 field season, during which we encountered 12 sites, two of which contain lithic artifacts of ambiguous typology that may date to the PHT, as well as a handful of isolates, one of which may date to the PHT. We use GIS to analyze the distribution of archaeological materials in the environment and discuss future directions for PHT-focused fieldwork in the area.

Baker, Caitlin

[269]

USACE Tulsa District Wister Lake Site Preservation Project

In 1975, 41 sites surrounding the USACE Wister Lake, located in Latimer and LeFlore counties in Oklahoma, were designated as part of a National Register Historic District. Unfortunately, due to extreme local looting and fluvial action, less than 21 of these sites are still present today. USACE Tulsa District is beginning a site preservation project dedicated to protecting these sites and limiting the effects of looting and fluvial action in the future. This project consists of several segments: initial research through site files, physical site checks, targeted pedestrian survey, and the protection of sites through methods such as placing riprap or planting poison ivy. Once the most vulnerable sites have been protected, a historic properties management plan will be created in order to continue the best site preservation practices in perpetuity. Potential helpful programs, such as a public archaeology project or listing more sites on the NRHP, are being considered as future directions for this project after site preservation has begun. The purpose of this poster is to fuel discourse between the author and other archaeologists with experience in site protection and anti-looting practices.

Baker, Suzanne (A/HC [Archaeological/Historical Consultants])

[296]

The Question of Monumentality in the Sacred Spaces and Features of Ometepe Island, Nicaragua

Ometepe is the largest island in Lake Coçibolca (Lake Nicaragua), itself the largest body of freshwater between Lake Titicapa in South America and the Great Lakes of North America. Its topography is unique, composed of two volcanoes—one active (Concepción) and one ancient and dormant (Maderas). A vast array of petroglyphs on Maderas and statuary and clusters of mounds on both volcanoes comprise some of the unusual man-made features found on this distinctive island. Words like “monument” and “monumentality” elicit such connotations as extraordinary size, importance, commemoration, and ritual, all usually associated with human-built environments. Some natural features have, however, also been called monuments, usually because of some unique cultural and/or scientific importance and, often, impressive size. This paper will discuss how or whether Ometepe’s built constructions can in themselves be considered “monumental,” whether the intersection of unusual natural features with the ritual and ideology represented in the island’s man-made constructions more accurately define our notion of “monumentality,” and what these ideas and features signal regarding social complexity.

Bakhtadze, Nodar

[233]

Issues of the Davit Gareji Monasteries’ Structure on the Background of the Early Byzantine Monasticism

In the south of the Kakheti region (Georgia), on the uninhabited vast territory, there is a monastic area known as Davit Gareji, which includes about 20 independent monastic complexes. According to the historical sources, the first Cristian monasteries were found here in the sixth century by the desert Fathers emerged from movement of the Syrian monasticism. The internal life continued incessantly including the High Middle Ages and subsequently, they underwent serious reconstruction along with the development. Since only a small part of the Davit Gareji complexes has been studied archaeologically to some extent, the determination

of their age of origin or their individual components is still in the initial phase. That applies also to the peculiarities of the worship service performed inside these complexes. In the recent years we conducted architectural and archaeological studies in order to correct this situation. Of course, we checked the correctness of the obtained results against the background of the early Byzantine monasticism in the neighboring foreign countries. It turned out that the vast majority of monasteries of Davit Gareji were arranged in the manner of the Laura in the sixth–ninth centuries.

Balabuch, Allison (University of Victoria)

[250]

Interdisciplinary Collaboration between Educators and Archaeologists

Archaeology contains fascinating subject matter that can provide the themes and content for many school subjects in K–12 education. Although there are many resources available for teachers, they are often difficult to find and/or only focus on the basic skills or tasks of archaeologists. What educators need is access to the rich and diverse research and knowledge possessed by archaeologists worldwide. Often more current or area/topic specific archaeological research is inaccessible due to paywalls and due to the complexity and structure of academic articles. Through collaborations between educators and archaeologists, rich resources and learning activities can be developed to mobilize knowledge and widen the scope of voices and narratives heard in school classrooms. This paper aims to share reflections on effective collaborations and make the case for future partnerships between the disciplines of education and archaeology.

Balanzario Granados, Sandra (Instituto Nacional de Antropología e Historia)

[159]

Chair

Balanzario Granados, Sandra (Instituto Nacional de Antropología e Historia)

[159]

Nuevas exploraciones en el asentamiento prehispánico de Dzibanché, Quintana Roo

El sitio prehispánico de Dzibanché tuvo una ocupación continua, desde el periodo del Preclásico Medio-Superior hasta el Clásico Tardío (300 aC-800 dC). Ocupación que continuó con una población menor hasta el periodo del Clásico Terminal-Posclásico (900-1500 dC). Fue el asiento de la dinastía Serpiente “Kaanu’l” en una de las primeras etapas de su historia, durante el periodo del Clásico Temprano Maya (250-650 dC). Dinastía que continuó viviendo en Dzibanché, aún después de dividirse y trasladarse al asentamiento de Calakmul, durante el periodo del Clásico Tardío (650-800 dC). Los datos epigráficos actuales, sugieren que el nombre de Dzibanché era Kaanu’l “lugar de serpientes” y sus gobernantes eran los ‘señores sagrados de Kaanu’l’ (Martin y Velásquez 2016). Recientes exploraciones (2023), en los complejos monumentales Tutil, Lamay y Kinichná, han documentado una uniformidad en los sistemas de enterramiento y variantes arquitectónicas relacionadas con el estilo local “Pilastras Pareadas”. Las investigaciones realizadas en los asentamientos prehispánicos de Dzibanché e Ichkabal, con el apoyo del análisis lidar, permiten confirmar que fueron entre los centros urbanos más extensos de las tierras bajas mayas en los periodos del Preclásico y Clásico (Balanzario y Estrada-Belli 2021).

Balanzario Granados, Sandra [159] see Estrada-Belli, Francisco

Balanzario Granados, Sandra [159] see Tokovinine, Alexandre

Balanzario Granados, Sandra [159] see Velásquez García, Erik

Balanzategui, Daniela (UMASS Boston), Marianne Sallum (UMASS Boston; Universidade de São Paulo), Yacunã Tuxá (Universidade Federal de Bahia), Natasha Gambrell (Eastern Pequot Tribal Nation) and Stephen Silliman (UMASS Boston)

[134]

Bridging Voices around a Circle of Dialogue between Tupi Guarani, Tuxá, and Eastern Pequot Peoples through an Activist and Social Latin American Archaeology

This paper presents the results of the first panel named “Indigenous Archaeologies, Territories, and Human Rights” as part of the seminar “Indigenous and Afro-descendant Peoples in the Americas: Collaboration, Archaeology, Repatriation, and Heritage,” an inter-institutional collaboration between the Interdisciplinary Research Laboratory on Evolution, Culture and Environment (MAE-University of São Paulo) and the Latin American Historical Archeology Lab (Department of Anthropology, University of Massachusetts, Boston). The seminar aims to ground intercultural exchanges on constructing political platforms that nurture strategic plans for Indigenous and African-descendant communities engaged in collaborative archaeological and heritage research. The first panel articulated the voices and agendas of Tupi Guarani, Tuxá (Brazil), and Eastern Pequot (USA) Indigenous peoples on dialogues around the topics of identities, recognition of their ancestral territories, decolonizing academia, linguistic revitalization, and politics of heritage. This conversation shed light on the shared history of colonization but, above all, on how the resistance of indigenous peoples has preserved their deep connections despite the weight of geopolitical and racial violence in the Americas. Their proposal for the future is based on strategies rooted in education and art expressions as tools in the struggle for civil rights.

Balco, William [22] see Kirk, Scott

Baldner, Linnea (Western Colorado University), Jessica Weinmeister (Binghamton University), Daniel Hampson (Binghamton University), Ava Godhardt (Independent Scholar) and David Hyde (Western Colorado University)
[284]

What a Cache! Ritual Activities at the Medicinal Trail Community, a Small Rural Maya Site in Northwestern Belize
During the 2023 field season, excavations uncovered evidence for ritual activities at Group M of the Medicinal Trail Hinterland Community, an ancient Maya farming village in northwestern Belize, near the political center of La Milpa. Initial survey and brief excavations from the 2017 field season indicated the group was atypical of architectural groups from elsewhere in the community, not being residential or a work area associated with terraces. Excavations between the courtyard and Structure M-3, underneath a layer of construction fill, was a capstone supported by three upright stones, overlying a so-called Maya “God,” or “Face” pot. Within the pot was a sap-like residue and ash. At the same level and to the east, a concentration of large Early Classic Tzakol ceramic sherds were discovered that appeared to have been placed against a platform wall, suggesting the cache was part of a termination ritual. This finding, the presence of a stela, and others, indicates that Group M may have been a primarily ceremonial space. This discovery has implications for our understanding of Group M’s function and prehistoric ritual practices of the Maya at small rural communities.

Balée, William (Tulane University)
[303]

Discussant

Bales, Emily (Far Western Anthropological Research Group Inc.) and Phil Kaijankoski (Far Western Anthropological Research Group Inc.)
[269]

Identifying Deeply Buried Sites: A Case Study from Site CA-SLO-16, Morro Bay, California

Archaeologists have historically studied the human-environment relationship through the lens of behavior, activity, and advancement. The study of past landscapes is focused on the human behavior response to these changes, not the effects these environmental changes have on archaeological sites. Geomorphological studies allow for understanding environmental change and the natural processes that alter the environment (global warming, flooding, sea-level rise, etc.). These environmental factors not only have an effect on the people of that time but also preservation and visibility of archaeological sites and later, the appropriate methods for identification of these resources. This case study highlights how landscape evolution, surface landform age mapping, buried site sensitivity modeling, and geoarchaeological identification methods can affect the

probability of identifying deeply buried archaeological sites. Additionally, this poster will provide geoarchaeological applications for future research.

Ball, Daunte

[15]

Challenges on the Road from 9th Avenue to Professional Archaeology

While the recent uptick in the amount and frequency of contemporarily, socially relevant sessions and symposia held at SAA annual meetings can certainly be said to be commendable—truly, a much-needed and beneficial pursuit/meta-analysis—I think that a significant intersectional aspect that often gets overlooked when archaeologists engage in these sorts of discussions, regarding the structural barriers that exist to persons from historically disadvantaged backgrounds being able to go on to obtain success in the archaeological field, is the role that having an inner city upbringing can play in shaping a scholar’s experiences on the road to becoming a practicing archaeologist, and thereafter. Originating from South Central Los Angeles, and only being a second-year graduate student at the University of Arizona, this paper seeks to anecdotally draw from some of the numerous challenges that I have faced as a young Black man from the inner city to highlight some of the common struggles that persons from similar backgrounds and communities have to face in order to find success and make places for themselves in a field that can often make such persons feel the furthest away from social context(s) that they can most relate to.

Baltus, Melissa [82] see Buchanan, Meghan

Bamforth, Douglas

[33]

Chair

Bamforth, Douglas, Kristen Carlson (Augustana University) and Matt Reed (Pawnee Tribe of Oklahoma)

[33]

Thirteenth- and Fourteenth-Century Redstone Pipes and Social Change on the Central Great Plains

Redstone elbow pipes, often made from catlinite from the Pipestone quarries in Minnesota, play essential roles in many Pawnee ceremonies, including the Hako ceremony, and in the calumet ceremony that was widespread in eastern North America. They appeared first during the thirteenth century in Central Plains tradition communities in eastern Nebraska. Excavations at 25BD1 in Boyd County, Nebraska, produced one finished and two unfinished redstone elbow pipes; local collectors showed us three additional finished pipes from the area. This paper describes the Boyd County examples and their significance in the context of late thirteenth-century social change on the central Plains, including evidence that Oneota-style disk pipes also appeared in eastern Nebraska at this time.

Bandy, Brandon “Everett” [176] see Watts Malouchos, Elizabeth

Banerjea, Rowena [22] see Pluskowski, Aleks

Banks, Kimball (Metcalf Archaeological Consultants Inc.)

[313]

Moderator

Banning, Edward (University of Toronto)**[116]***Changes in the Size and Organization of Storage in the Neolithic and Chalcolithic of the Southern Levant*

The size and spatial organization of facilities for the storage of cereals and pulses provide important clues to the socioeconomic organization and degree of inequality of households and communities. In the context of late prehistory in the southern Levant in the Middle East, we might expect changes in storage to result from the growing importance of agricultural economies as well as social changes in the scale and equitability of redistribution. Analysis of the volume and accessibility of storage facilities from the beginning of the Neolithic to the onset of the Early Bronze Age, despite a number of uncertainties, indicates that there was no monotonic change in storage and its management. Instead, the scale of storage in households and supra-household groups waxed and waned and probably also varied geographically, probably in response to differences in both social arrangements and local agricultural potentials.

Baquedano, Elizabeth (UCL Institute of Archaeology)**[21]***Mesoamerican Death Imagery Oversimplified*

The Aztecs and other Mesoamerican peoples were exceptionally aware and observant of their natural world and the cycles of nature, particularly the alternation of the seasons. Many of their representations were aptly identified with the dry or rainy seasons. Likewise, dead individuals were depicted in the natural death processes, such as rigor mortis, body skin decomposition (putrefaction), as well as with other death symbols: skulls, skeletons, or death joints (with skulls), normally described by Mesoamerican scholars as an alleged mortuary obsession of Aztec art and iconography. Rather than a “religious” obsession with death, Aztec art and iconography reflect a legitimate scientific interest in the natural world. I will show several examples from Codex Borgia using PCA graphs to see variables and their correlations in death imagery while offering new interpretations. Scholars have for decades described death imagery as terrifying demons, grotesque, crouching monsters, and “demon faces” adorning the elbows, knees, claws, and so on. These descriptions hardly do justice to the Aztecs’ close observation of the human body and their surrounding nature.

Baquedano, Enrique (Museo Arqueológico y Paleontológico de la Comunidad de Madrid. IDEA), Juan Luis Arsuaga (Univer. Complutense de Madrid. UCM-ISCI, Madrid), César Laplana (Museo Arqueológico y Paleontológico, Com. Madrid), Belén Márquez (Museo Arqueológico y Paleontológico, Com. Madrid) and Rosa Huguet (IPHES-CERCA, Univ. Rovira i Virgili. CSIC Madrid)

[25]*A Neanderthal Hunting Sanctuary in the Interior of the Iberian Peninsula (Pinilla de Valle, Madrid, España)*

In the Des-Cubierto Cave, in the Central System Range of the Iberian Peninsula, 35 crania of large herbivores (*Bison priscus*, *Bos primigenius*, *Cervus elaphus*, and *Stephanorhinus hemitoechus*) were recovered in an area where the main gallery widens and rounds off. Some of the crania are associated with small hearths. It seems that the heads had the mandibles removed outside the cave, and at least some maxillae inside the cave. Moreover, the brains were extracted from the crania by resting them on anvils and using large hammerstones found next to them. However, what is really exceptional is that postcranial bones are anecdotally represented. The introduction by Neanderthals of these skulls with percussion, cut, and fire marks has occurred on several occasions over time. The interpretation of the site with no apparent subsistence activity seems to be linked to some rite whose nature eludes us but is very probably related to the hunting activity of Neanderthal groups. One might think of celebration, initiation, passage, and propitiatory rites. The most parsimonious interpretation from the cognitive point of view, and without excluding other possible explanations, is that these crania were turned into hunting trophies. It has been proven that Neanderthals had symbolic capacity.

Bar, Shay (Haifa University)**[6]***Tel Esur: Summary of Fourteen Seasons of Excavations and a Long-Lasting Community Archaeology Project*

Tel Esur is situated in Israel's Sharon Plain, near Nahal 'Iron (Wadi 'Arah), 10 km southwest of Megiddo. I will present the results from the main excavation areas and insights into our community project: Area B: Middle Bronze Age (henceforth MBA) Ila fortification system with a 3 m thick city wall and a pyramidal tower. Abutting the wall were storage rooms and above them MBA strata of later unwallled settlements. Late Bronze Age (henceforth LBA) remains were also revealed, including a temple. Area BI: LBA (fourteenth century BCE) structure, with 80 complete vessels crushed on its floors, including vessels exhibiting Egyptian influence. A fifteenth-century BCE stratum found supports the identification of the place with Djefeti, mentioned in Thutmose III's Canaan campaign in 1457 BCE. Area D: ninth- to eighth-century BCE administrative buildings were found, an indication of the efforts of the Kings of Israel to enforce their jurisdiction over the coastal plain. A unique community excavation has been held at the site annually since 2010. Our team is comprised of students from local high schools. We promote cooperation between Jews and Muslims, coming from religious and nonreligious backgrounds. During the last 14 years, 6,000 children have worked with us.

Barakat, Sarah (University of Aberdeen), Elodie-Laure Jimenez (University of Aberdeen), Vaughan Grimes (Memorial University, St. John's, NL, Canada), Emmanuel Discamps (TRACES, France) and Kate Britton (University of Aberdeen)

[247]*Combining Strontium and Sulphur Isotope Analysis to Reconstruct Paleolithic Reindeer Mobility*

Understanding the movement patterns of past animals is key to unravelling Paleolithic hunter-gatherer mobility and landscape use. Strontium isotope analysis ($^{87}\text{Sr}/^{86}\text{Sr}$) has long been used as a proxy for provenance studies based on the high correlation between strontium values in faunal tissues and underlying lithology. However, interpreting $^{87}\text{Sr}/^{86}\text{Sr}$ results can prove challenging in areas with either homogenous or heterogenous lithologies. Sulphur isotopic analysis ($\delta^{34}\text{S}$) is becoming increasingly useful as a secondary indicator of provenance due to an increased understanding in sulfur variability in relation to coastlines/sea spray effects, changes in lithology and with climate. Thus, combining $^{87}\text{Sr}/^{86}\text{Sr}$ and $\delta^{34}\text{S}$ analyses offers the potential to improve reconstructions of individual movement histories and to infer species-specific spatial behaviors. Focusing on Late Pleistocene France, we present novel $^{87}\text{Sr}/^{86}\text{Sr}$ and $\delta^{34}\text{S}$ isotope data evidencing reindeer mobility patterns across the sedimentary basins of France. By comparing time-series $^{87}\text{Sr}/^{86}\text{Sr}$ data and bulk collagen $\delta^{34}\text{S}$, we generate a diachronic dataset including samples from Middle and Upper Paleolithic sites, allowing us to reconstruct seasonal movements from early-life and compare with later-life spatial data. This data further illuminates behavioral plasticity in Late Pleistocene reindeer, and the relationship between reindeer paleoecology to past climate change and human behaviors.

Baranov, Vyacheslav [91] see French, Katherine

Barba, Luis (Universidad Nacional Autónoma de México)**[152]***The Tunnels in Teotihuacan: Geology and Technology to Extract Tezontle*

This paper aims to review how the Teotihuacanos took advantage of the available geological resources for the construction of the city. The study of the geological characteristics of the Teotihuacan Valley has revealed that what we presently observe is the consequence of the long-term volcanic activity produced in several steps. First, a high-pressure escape of magma shaped mounds of volcanic scoria that later were covered by a thick layer of yellowish tuff that made invisible the previous activity. To take advantage of the geological resources, Teotihuacanos developed a strategy that first used the soil layer. Then they excavated and passed through the tuff layer to reach the underlying scoria and made tunnels to extract and use this light but resistant material. Scoria (tezontle) was widely used to cover the main pyramids with large blocks, but also with middle-size blocks they raised the nucleus of the walls of the apartment compounds and finally, as

grinded tezontle was mixed with mud to prepare the mortar to plaster the walls and floors of the city buildings. The large quantities of materials used to build the city left behind deep scars in the terrain forming large depressions and many tunnels underground.

Barba, Luis (Universidad Nacional Autónoma de México)

[218]

Discussant

Barba, Luis [152] see Chavez, Rene

Barba, Luis [194] see Hernández-Grajales, Meztli

Barbel Le Page, Héloïg (Université Laval, Québec)

[307]

Discussant

[307]

Chair

Barbel Le Page, Héloïg (Université Laval, Québec)

[307]

Which Stories for Which Storytelling? A Community-Based Approach to the Nineteenth- to Twentieth-Century Nunatsiavummiut Material Heritage

This presentation discusses archaeological research that is intended to create a space for the inhabitants to reconnect with their material heritage on the land. The project took place in the Nain region (Nunatsiavut, Labrador, Canada) in 2021 and 2022. It contributed to the Nunatsiavut Government policies by investigating Inuit material heritage facing conservation threat. This project seeks to step back from colonial perspectives by promoting narratives about the diversity of lifeways on the land. Rooted on a collaboration between Université Laval and the Archaeological Office of the Nunatsiavut Government, a community-based approach was adopted as a way to counter the helicopter research paradigm. A keystone was the anchoring on a local network of governmental institutions whose mandates are to defend Nain community interests. About 30 community members contributed in two ways: specialized services (guides, pilots) and nonspecialized contributions to excavations. The wage-earning policy aimed to shift from the specialization paradigm that relies on symbolic capital, to create spaces that entangle hiring with training for local workers. The gathering of perspectives from this diversity of actors fed the research with a need to refine research questions and root them in the complexity of local history.

Barber, Sarah (University of Central Florida) and Arthur Joyce (University of Colorado, Boulder)

[160]

Building and Breaking Primordial Space at the Río Viejo Acropolis

Formative period civic-ceremonial facilities like the Río Viejo acropolis in the lower Río Verde Valley on the coast of Oaxaca emerged from the combination a wide range of elements: conceptual, material, environmental, infrastructural, human, and divine. Built rapidly in the first centuries of the Common Era, the multiple monumental structures comprising the acropolis were not only the site of temporary human actions, but also an active repository enveloping the physicality of human relationships with the other animate entities with which ancient people shared their world. Drawing on multiple seasons of excavation on the Río Viejo acropolis, this paper traces the acts and materials through which human-divine relationships unfolded in monumental space. Analysis focuses particularly on processes of breaking down—through burning, consumption, smashing, and discard. Combining ceramic analysis with small-scale geospatial analyses and broader observations of architecture and features, we assert that the creation of primordial spaces at Río Viejo involved the juxtaposition of creative and destructive action. Evidence suggests that engagement with the divine at the acropolis often involved discomfort, disorder, and destruction.

Barber, Sarah [200] see Boal, Zachary

Barbera, Aida (Université Laval Canada), Nathanael Heller (R. Christopher Goodwin & Associates Inc.) and Emily Meaden Jeansonne (R. Christopher Goodwin & Associates Inc.) [131]

Parasitism and Care in the Schoolyard: Archaeoparasitology of an Early Twentieth-Century School Latrine in New Orleans, USA

McDonough No. 5 School (1882–1930) was built in the historic Algiers neighborhood of New Orleans and was one of the first schools to educate Black children. But as the neighborhood turned Whiter and wealthier, the school was renovated, the Black children turned away and relocated, and the newly renovated school was given over to the White children of Algiers. In 2021, R. Christopher Goodwin & Associates Inc. conducted extensive excavation locating deposits and cultural features that were associated directly with the historic McDonough No. 5. School. Among them, a privy feature containing large quantities of school-related artifacts and rich in nightsoil was identified. Three samples consisting of two coprolites and a general soil subsample were submitted for parasitological examination. These analyses have recovered evidence of whipworm (*Trichuris trichiura*) and mawworm (*Ascaris lumbricoides*) signaling the presence of fecal-borne parasitic infections. Low parasitic rates and the finding of medicinal bottles, some of which were marked as vermifuge, suggest that care measures were put in place. As the first of its kind in Louisiana's historical archaeology, the present study contributes to a better understanding of the nature of parasitism and care among Black American communities at the turn of the twentieth century.

Barbieri, Alvise [265] see Karrar, Osman

Bardi, Emma [106] see Ramos Osnaya, Carmen

Bardolph, Dana (Northern Illinois University) and Anna Chitwood (Northern Illinois University) [293]

Paying the Price for Passion: Navigating Compensation Realities in US Academic Archaeology

This paper explores the complex realm of compensation realities encountered by academic archaeologists by examining the interplay between salary structures and regional cost of living variations. A hyper-competitive job market and the gradual decline of tenure track job availability have had profound effects on early-career scholars' prospects and institutional stability, with resulting burdens on contingent faculty straining academic quality, research output, and student mentorship. Furthermore, gendered and racial salary disparities persist across US academia, with broader cross-disciplinary studies revealing that women and BIPOC academics continue to earn less than their White male counterparts. In this study, we evaluate discrepancies in compensation across professional ranks and geographic locations within US academic archaeology, drawing on public salary databases and cost of living indices. We conclude with a discussion on how potential collaborative efforts, institutional reforms, and policy interventions might enhance future financial stability and equitable treatment for professionals across the spectrum of archaeological practice.

Bardolph, Dana [256] see Chitwood, Anna

Bardolph, Dana [81] see Mullins, Patrick

Bardolph, Dana [87] see Raab, Bailey

Bardsley, Sandy (Moravian University) and Jamie Paxton (Moravian University) [257]

"We've never been allowed to fail before!" Undergraduate Experimental Archaeology Courses at the Crossroads of History and Archaeology

For five years, we have cotaught an undergraduate Introduction to Experimental Archaeology course under the auspices of the history department at a small university. In this paper, we examine the ways in which history and experimental archaeology share traditions of scholarship, learning objectives, and appeal to students. Yet, at the same time, differences between the two fields create opportunities for both. We highlight the ways in which experimental archaeology offers students the chance to play and to fail. In other words, students may try out skills, theories, or experiments in which outcomes are unknown. Our students have consistently remarked on and appreciated the freedom this offers them, especially as graduates of a school system based on No Child Left Behind. Historians, too, tend to be conservative about exploring data that will not support a suspected thesis. From a pedagogical standpoint, therefore, experimental archaeology offers advantages that go well beyond the material being taught. On the other hand, connections to a history department offers archaeologists access to a much larger student body and to broader historical narratives to which their research may be tied.

Barkai, Ran (Tel-Aviv University)

[25]

Fat, Potency, and Respect: The Holy Triad of Human-Animal Relationships in the Paleolithic

Animals played a major role in human subsistence, well-being, and relationship with the world around them since time immemorial. Humans were highly dependent on their animal counterparts for their successful survival and adaptation; however, this dependency was expressed in respect and appreciation toward these animals. I believe that the early archaeological record is consistent with such statements, and that fat, potency, and respect were major key-issues in human interaction with game animals in the Paleolithic. Case studies regarding the use of elephant, bird, and fallow deer body parts in archaeological contexts from the Levant and beyond will be used in order to implement these claims.

Barker, F. Timothy [311] see Donta, Jaime

Barker, Kristin [171] see Burnett, Paul

Barket, Theresa [265] see Macdonald, Danielle

Barlament, Jared [285] see Griffin, Delancey

Barnes, Kelli (US Fish and Wildlife Service ID/OR)

[137]

Chair

Barnes, Kelli (US Fish and Wildlife Service ID/OR)

[137]

A Case for Digging (into Big Data)

A quick dive into regional databases can be invaluable in managing local resources. Updating regional contexts tends to be time consuming and expensive. However, obtaining general numbers of different site types, NRHP eligibility assessments, dates of use, and other basic information can be a quick exercise to guide future management. For example, basic regional data may show that NRHP eligibility is skewed too heavily toward considering a large number of sites NRHP eligible based on data potential, when actual research at all of those sites would be nearly impossible. These types of data can also help to determine types of sites that are less common and may require greater protection. Finally, a broad summary of available information can serve as a baseline for developing a detailed historic context with pragmatic temporal and geographic boundaries.

Barnett, Kay [286] see Field, Sean

Baron, Joanne (Dumbarton Oaks Research Library and Collection)

[90]

Chair

Baron, Joanne (Dumbarton Oaks Research Library and Collection)

[90]

Classic Maya Wahys: What, Who, Where, and Why?

The Kerr cataloguing project at Dumbarton Oaks is creating opportunities to reexamine iconographic motifs and hieroglyphic texts on Maya pottery. One avenue in which this has been fruitful is the analysis of vessels depicting wahy creatures. In modern communities, wahys are powerful individuals with the ability to change shape at night, often for the purpose of causing harm or mischief. Classic Maya wahys were similarly linked to sorcery and have highly specific names and iconographic attributes aligning them with diseases and other misfortunes. In 1994, Grube and Nahm published their “census” of 55 such entities in Kerr’s *Maya Vase Book*. Today, after examining 186 scenes of cavorting wahy creatures, I have edited and expanded that list to 89. Glyphic captions frequently associate these entities with specific place-names, allowing me to analyze how they were distributed in space, and what they might mean politically.

Baron, Justyna (University of Wrocław; Field Museum of Natural History)

[170]

Chair

Baron, Justyna (University of Wrocław; Field Museum of Natural History)

[170]

Cross-Craft Interactions in the Central European Bronze Age

Archaeometric data obtained for various raw materials used by Central European communities in the Bronze Age (ca. 2300–800 BC) allow us to study technological interactions in the past realized mostly within usually small and densely settled sites. In this study, cross-craft contact zones between the selected activities are crucial. They are likely to reflect the social space of communication concerning the objects to be manufactured. For instance, the development of metallurgy required plenty of clay casting molds produced with the use of potting techniques. Were they manufactured according to traditional recipes and technological choices or did they have to meet some other, specific standards? How did the high temperatures used in metallurgy influence the quality of household pottery at the same sites? Why do we have so little evidence of the use of metal tools on Bronze Age bone and antler objects although they are more effective in processing animal hard tissues? How did the quality of bone tools affect their use in pottery making? My main objective is, therefore, to provide a comprehensive and coherent interpretative model of communication and knowledge transfer in various types of activities, both specialized and domestic.

Barr, Sam [6] see Ek, Jerald

Barrera, Jimmy (Federal Railroad Administration)

[192]

FRA Cultural Resources Division

The Federal Railroad Administration (FRA) Cultural Resources Division is comprised of archaeologists, architectural historians, and historians. With responsibility to oversee federally funded and federally authorized projects across the United States. This presentation will provide an overview of FRA’s mission with emphasis on cultural resources responsibility and project examples.

Barrera, Hector [176] see Muro Ynoñán, Luis

Barrientos, Isaac [260] see Manin, Aurelie

Barrientos, Tomas (Universidad del Valle de Guatemala), Ernesto Arredondo Leiva (Universidad del Valle de Guatemala), Julia Guernsey (University of Texas, Austin) and Diego López García (Universidad del Valle de Guatemala)

[309]

The Presence of Potbelly Sculptures in the Lake Atitlán Basin, Guatemala

The sculptural style known as potbelly (“barrigón”) has been widely documented in archaeological sites in the southern Maya region, from Chiapas to El Salvador, with a few examples in the Lowlands and other areas of Mesoamerica. However, most of these monuments are concentrated in sites occupied during the Late Preclassic period on the Guatemalan Pacific coast and Piedmont, as well as in Kaminaljuyu. In this paper, data will be presented on the poorly documented, but significant presence of this sculptural style in various areas of the Lake Atitlan Basin, which includes two fortuitous finds made in the year 2022. The interpretation of the meaning of these sculptures is still a matter of debate among specialists, partly because their characteristics show variations between each region. Therefore, the specimens found to date in the Lake Atitlan Basin provide new data regarding their geographic distribution in the Maya Highlands, their anthropomorphic features, and symbolic and iconographic associations.

Barrientos, Tomas [159] see Canuto, Marcello

Barrier, Casey [253] see Henry, Edward

Barrios, Edy (CUDEP-USAC), Cameron McNeil (Lehman College; Graduate Center, CUNY), Kenia Chacón (USAC), Zachary Hruby (Northern Kentucky University) and Jackeline Quiñonez (Graduate Center, CUNY)

[291]

Plaza A, Plan de las Mesas, Copan, Honduras: The Sacred Center of an Early Classic Hilltop Fortress

The Plan de las Mesas archaeological site is a fortress built on top of a high hill, which dominates the Copan Pocket at its northern end. Plaza A, Group I, is the second highest area of the site and the most complex, containing the tallest pyramidal platform and a central altar to the south, an atypical pattern in the Copan area, but one extremely common at Teotihuacan. Other buildings at the plaza have shown architectural features also related to Teotihuacan as well as a high percentage of Pachuca obsidian. From Plaza A one can see not only the Copan Acropolis but also a wide extension of the valley floor, where most of the population was living during the Classic period. Also visible from this high scenic point are other mountain sanctuary sites such as the locations of Stelae 12 and 10, Los Sapos, La Laguna, and Cerro Chino. These sacred spaces may have also functioned as checkpoints to visually control both the local population as well as from which to spot any incursion from outsiders. Las Mesas was also an ideal location from which to watch the movement of celestial bodies in the night sky.

Barrios, Edy [291] see McNeil, Cameron

Barros, Beatriz (Indiana University)

[166]

Archaeology during the Portuguese Dictatorship: The Role of Regional Institutions

Portugal's authoritarian regime, the conservative and nationalist Estado Novo (1933–1974), attempted to create a nationwide network of commissions dedicated to the supervision of archaeological, historical, and artistic monuments. The Municipal Commissions for Art and Archaeology (MCAAs, Comissões Municipais de

Arte e Arqueologia, in the original) were created as early as 1937, with some lasting until 1977, three years after the fall of the regime. This time frame, 1937–1977, makes the MCAAs exceptional case studies for understanding the context in which archaeological activities developed during and immediately after the dictatorship. In this paper I will briefly present some preliminary results of the MCAAs research project, which aims to determine what specific activities these MCAAs carried out in relation to archaeology and cultural heritage, whether they contributed to the strengthening of the regime at the local level, and whether there is any lasting influence of the MCAAs on the development of Portuguese archaeology since the end of the dictatorship.

Barry, Katherine [82] see Smallwood, Ashley

Bartelink, Eric [241] see Hannigan, Elizabeth

Bartelink, Eric [100] see Tichinin, Alina

Barton, C. Michael (Arizona State University)

[162]

Chair

Barton, C. Michael (Arizona State University), Alfredo Cortell-Nicolau (University of Cambridge, UK), Agustín Díez-Castillo (Universitat de València, Spain), Javier Fernández-López-de-Pablo (Universitat d'Alacant, Spain) and Salvador Pardo-Gordó (Universidad de la Laguna, Spain)

[308]

Machine Learning for Chronology Building in Regional-Scale Synthesis

Chronological control is essential for regional-scale research in order to establish contemporaneity or temporal sequences among spatially distributed assemblages. Archaeology has benefited from advances in radiometric dating methods, as well as statistical protocols for combining dates to achieve greater precision age estimates. Yet the potential for applying these methods remains limited, requiring that samples of a narrow range of materials be recovered (often with special handling) from carefully excavated contexts. This leaves nearly all surface collections and many excavated assemblages undatable by these methods. Archaeologists also have long used artifact morphologies to estimate the age of assemblages. While widely applicable, this approach faces questions over subjectivity, replicability, and the causes of variation in artifact morphologies (and hence, their reliability for chronology). Fortunately, a suite of analytical methods, broadly termed machine learning, can combine these different dating approaches, allowing a much wider array of assemblages from many contexts—including surface assemblages—to be dated. We compare the accuracy and reliability of a suite of machine-learning algorithms for chronology building, widely accessible on normal desktop computers, using assemblages from dated, excavated contexts. We then illustrate their usefulness in regional synthesis by applying them to surface assemblages extending across eastern Spain.

Barvick, Kathleen (University of Arizona)

[111]

Using Extant Photographs of Ceramic Collections for Geometric Morphometric Archaeological Research

Modern archaeology is constantly seeking innovative, nondestructive ways to learn new things about the past from existing collections. One powerful tool in the modern arsenal is Geometric Morphometrics (GMM), a method of quantitative shape analysis that can be applied to study technological style and communities of practice through material culture. 2D GMM requires only photographs, which museums already use to document their collections. If precise enough photographs of archaeological materials exist, then many new avenues of GMM analysis may be possible on collections that are difficult to access, or even that have already been repatriated. This paper compares the analytical effectiveness of profile photos of ceramic Roosevelt Red

Ware vessels from thirteenth- and fourteenth-century eastern Arizona that were taken previously, as part of museum documentation, to photos of the same vessels collected with the specific requirements of GMM in mind. This tests the ability to use preexisting photographs for Geometric Morphometrics research, offers insights for museum documentation practices, and investigates what information archaeologists are capable of learning from GMM on photos of ceramic vessels from the coalescent communities of the 1200s and 1300s Southwest.

Bar-Yosef Mayer, Daniella (Tel Aviv University)

[116]

Chair

Bar-Yosef Mayer, Daniella (Tel Aviv University), Iris Groman-Yaroslavski (University of Haifa) and Naomi Porat (Geological Survey of Israel)

[116]

The Neolithic Stone Beads of Nahal Hemar Cave, Israel

The Pre-Pottery Neolithic B (PPNB) site of Nahal Hemar Cave in the Judean Desert yielded, among others, many beads made of wood, plaster, shell and stone. The study of 35 stone beads recovered at the site highlights three main interrelated aspects: a broad range of raw materials used, the workmanship of bead production according to their types, and the fashioning of beads into types intended for a particular method of using them. Raw material identification was based on SEM-EDS and XRF analyses. Eleven minerals identified reveal a vast geographical range from which they were extracted. Typologically, they have mostly a round and lenticular transverse section. Experimentation indicated that the bead makers had an intimate acquaintance with the properties of the minerals. Microscopic wear analysis indicates the methods of abrasion and polishing, and selective methods of drilling and binding consistent with bead types. This is a technological approach that reflects careful planning and execution that contributes to the wider perspective of novel trends of the Neolithic period paralleling other developments associated with the establishment of village life and agriculture.

Barzilai, Rebecca (Indiana University) and Andrea Bridges

[72]

Challenges in Assisting Removal Tribes in the Reburial Stage of the NAGPRA Process

For over 100 years, large museums, universities, and institutions in the United States have amassed extensive collections of Native American remains and sacred objects from archaeological sites. The outcries of Native American communities who sought to protect their sacred sites and burial grounds from being repeatedly looted throughout the country were largely ignored. The passing of NAGPRA legislation in 1990 was crucial in transferring power back to Native communities to reclaim and rebury their ancestors. Despite this legislation, and efforts toward consultation and repatriation with institutions, communities struggle with the logistics regarding the reburial of their ancestors and sacred items. This is especially true for removal tribes who no longer have tribally owned land in the Midwestern states they were forcibly removed from and may not have access to the archaeological sites from which those ancestors were initially laid to rest. A key issue is protecting the reburial sites from future looters if a state prohibits unmarked cemeteries, and the logistics around safe reburial. This poster delineates the reburial laws in Ohio, Kentucky, Indiana, and Illinois and how these laws constrain removal tribes when trying to rebury ancestors in their homelands at the sites from which they were removed.

Barzilai, Rebecca [72] see Olafardottir-Hamilton, Olof

Basanti, Dilpreet (Northwestern University)

[95]

Reconstructing Mortuary Rites through Micro-CT Forensic Taphonomy at Ancient Aksum, Ethiopia (AD 50–400)

This paper uses micro-CT and funerary taphonomy to reconstruct ancient Aksumite burials (AD 50–400).

Aksum, in northern Ethiopia, was the capital of an ancient polity that spread across the northern Horn of Africa and became a major power in the Indian Ocean trade. The most notable remains of the ancient capital are its towering funerary stelae and monumental tomb complexes. This paper presents data analyzing previously excavated human remains from two stelae tombs in the central cemetery at Aksum. Data looking at element representation and patterning of cutmarks point to the postmortem processing of Aksumite remains. Micro-CT histology of bacterial bioerosion on 20 samples from the two tombs supports this conclusion. Differences in stable isotopes between tombs further suggest their family orientations. When contextualized with previous excavation data, it is possible to reconstruct a rough sequence of burial and postmortem steps and demonstrate their relevance in shaping Aksum's mortuary architecture. I also show that these mortuary rites fit with a larger Aksumite history as inventions of tradition that negotiated the rising cosmopolitanism in the Indian Ocean trade.

Basham, G. Matt

[332]

Jack's Backyard: Earth Oven Features on the Edge of Eagle Nest Canyon

The canyon edge around Eagle Nest Canyon contains the remains of numerous prehistoric earth oven features. It was also the property of Jack Skiles, who made a lifelong contribution to the study of archaeology. This paper will document the results of excavations conducted during a 2013 field school on the property of Jack Skiles, including along his driveway and by his pool. The results show that numerous types of wood resources were used in the features. The results also show that earth oven cooking was done in different areas of the canyon edge based on landscape morphology, such as bedrock depressions, and the availability of wood resources that appear to have shifted over time based on changing climate.

Bastante, Jose [242] see Sieczkowska, Dominika

Bastide, Jamie (San Diego State University) and Seth Mallios (San Diego State University)

[205]

A Visual Analysis of Intersecting Identities: Nathan Harrison's Gender Performance in Southern California

Nathan Harrison, a formerly enslaved man from Kentucky, was adept at performing specific masculinities (and other identities) within different community groups. Through forced migration, Harrison traveled from Kentucky to California during the mid-1800s. After gaining his freedom, Harrison continued moving south until he settled in San Diego County. Archaeological excavations at his Palomar Mountain homestead uncovered an extensive artifact collection and archival work located abundant historical documents and oral narratives that detail Harrison's interactions with neighbors, friends, and tourists. Social network analysis will be used to determine how this personal community changed over time and space. A visual analysis will then be done on a selection of historical documents and oral narratives to understand how Harrison navigated social situations during a time of blatant racism and violence against African Americans.

Bastos, Murilo [178] see Di Giusto, Marina

Bates, Jennifer (Seoul National University)

[303]

Trees among the Cereal Fields: Arboriculture Reframed as Integral to the Food and Economic Systems of the Indus Civilization of South Asia ca. 3200–1500 BC

In this paper I synthesize a big picture of how people in the Bronze Age Indus Civilization of South Asia engaged with trees as a vital resource, and how there was no single conception of trees as “wild” versus “domesticated,” “orcharded” versus “stand-alone,” “exotic” versus “native,” and potentially “owned” versus “communal.” While wheat, barley, millets, and rice formed the staple food resource, in our desire to model

the underpinnings of urban-support systems—how the masses were fed—we have overlooked that the economy(s) and diets were more diverse and exciting than a daily dose of carbohydrates. The very first discoveries of plants in the Indus included dates, and since then a diversity of fruit remains have been found, alongside other datasets like wood, artistry, artifacts, and additional scientific data, that demonstrate that Indus systems of arboriculture enriched daily diets, complicated the economic system(s), and engaged with the mosaic environmental and cultural worlds that Indus peoples lived in. In this paper I play with notions of food, agriculture, trade, ritual, and ecological manipulation to explore how Indus peoples conceptualized trees within and without their spheres of daily life, pushing the boundaries of this oft-overlooked resource into new theoretical realms.

Bates, Jennifer [256] see Conte, Matthew

Bates, Jennifer [256] see Kim, Pangyu

Bates, Jessica [257] see Little, Aimée

Batres, Kimberly (Arizona State University), Neil Duncan (University of Central Florida), Lana Williams (University of Central Florida), Brigitte Kovacevich (University of Central Florida) and Michael Callaghan (University of Central Florida)

[122]

A Paleoethnobotanical Analysis of Ceramic Residues from Caches and Burials at the Lowland Maya Site of Holtun, Guatemala

Among the Maya, plant-based foods were not just important for sustenance but also had ritual meaning, especially emphasized when placed in graves and caches. Food offered during ritual performances created a reciprocal relationship between living individuals, their ancestors, and the gods. This paper presents the paleoethnobotanical results from the examination of seven ceramic sherds from the Preclassic through the Terminal Classic periods (800 BC–AD 900) associated with burial and cache offerings from the lowland Maya site of Holtun, Guatemala. Each whole vessel fragment was subjected to starch analysis, a method used to determine plant taxa on a microscopic level, as well as high-performance liquid chromatography and Raman spectroscopy to test for cacao residues. The identification of crops aside from the usual suspects like maize and cacao, such as manioc, yam, and malanga, suggests evidence of a complex ritual diet of the residues at Holtun. Although poor preservation can result from the environmental conditions of the Maya Lowlands, the results gathered from the preliminary starch and chemical residue analyses at Holtun indicate our ability to recover diverse plant remains from archaeological contexts and illuminates possible patterns of grave and offering types, social class, and variety in ritual diet.

Batun-Alpuche, Adolfo (Universidad de Oriente)

[83]

The Cozumel Bee People, Social Ecology, and Landscape Management during the Late Maya Postclassic
Landscape management in Cozumel during the Late Postclassic resulted in a network of stone walls (*albarradas*) demarcating the entire island resembling the structure of a beehive. This paper presents a comparison of some features of the social ecology of Yucatec stingless bees and the structure of stonewalls demarcating Cozumel, looking at the social ecology of beekeeping and the agrarian production implemented by the Postclassic Maya in the island. The Postclassic Cozumel Maya population was referred to in the colonial books (known as the *Chilam Balam*) as the bee people.

Batun-Alpuche, Adolfo [331] see Dedrick, Maia

Batun-Alpuche, Adolfo [254] see Slocum, Diane

Bauer, Alexander (Queens College, CUNY)**[258]**

Chair

Bauer, Alexander [258] see Fryer, Tiffany

Baumann, Steve [221] see Poister, Nicholas

Baumgartel, Olivia (Mississippi State University)**[24]***Cleaning Up Claiborne: Revising the Radiocarbon Dates of Six Decades of Research Using Chronometric Hygiene*

The Claiborne site, located in Hancock County, Mississippi, has been dated using many different techniques since discovery in 1967. In order to create a tighter chronology and firmly place it into the timeline of the Poverty Point culture, chronometric hygiene protocols were used to dismiss dates that are not as accurate or precise as current AMS dates. New AMS radiocarbon dates were then added into the revised database, narrowing down the age of Claiborne, therefore connecting it to other Poverty Point sites in the region.

Baustian, Kathryn (Skidmore College), Clair Ralston (University of Nevada, Las Vegas), Debra Martin (University of Nevada, Las Vegas) and Maryann Hobbs (SNA International for DPAA)**[272]***Dynamic and Diverse Roles and Identities of Women in Ancient Southwest Systems of Violence*

The definition of violence is unique to all societies. Violent behavior is thus recognized in myriad ways and observing it in past societies demands consideration of many forms of evidence. Interpreting individual roles in systems of violence requires that we look beyond weaponry, site destruction, male warrior burials, and lethal injuries. Our perception and interpretation of females as actively engaged in violent interactions in the past is shaped by our own social conditioning, cultural frameworks, and lived experiences. We present examples of women's diverse roles and identities within systems of violence through a bioarchaeological analysis of skeletal remains from several Mogollon sites (Grasshopper, Turkey Creek, Point of Pines, and several Mimbres sites). Considering injuries, disease, and skeletal robusticity in relation to mortuary contexts and social structures, we interpret the agency of women in times of conflict and their roles as aggressors, defenders, or supporters of warfare and raiding in the precolonial American Southwest. (No images of human remains will be displayed.)

Bautista, Jessica**[67]***Forest Use at Te Zulay, an Ancient Community at the Mouth of the Pastaza River in the Upper Amazonia*

The use of plants of ancient Amazonian societies is currently heavily debated. Much of such it concerns the difficulty of finding good paleobotanic evidence in archaeological contexts. Lately, old plant use strategies have been reconstructed mainly based on phytoliths, starch, and pollen evidence. However, the present study is focused on charred wood samples from Te Zulay, a mounded site located on the banks of the Pastaza River on the Ecuadorian Upper Amazon. The anthracological results indicate Te Zulay inhabitants' preferences for certain types of trees during their period of occupation of the site.

Bautista, Stefanie (University of Rochester), Justin Jennings (University of Toronto) and Willy Yopez Alvarez (University of Toronto)**[175]***Survey and Mapping of Antimpampa, an Early Horizon Monumental Center in Southern Peru*

Globally, the earliest cultural ecumene are associated with monumental centers that spurred greater local

and interregional interaction. Antimpampa, located in the Arequipa region of Peru, is one such monumental center that has remained largely unstudied. This poster presents the preliminary results of our 2020 archaeological survey at Antimpampa, which spans 90 ha and is comprised of 13 platform mounds, associated plazas, standing stones, and a monumental enclosure wall. Surface mapping and artifact collection reveal a mound-plaza group organization distinguished by walls and elevation changes, as well as areas of residence, craft specialization, and ritual activities on and around the mounds. Our research also demonstrates that Antimpampa is the only known site in the Andes with artifacts that reflect the northern Chavín and southern Yaya-Mama/Pukara styles, the two great iconographic traditions of the Early Horizon (850–550 BCE). A third tradition at Antimpampa featuring large slabs of rock painted with zoomorphic and anthropomorphic animals may have emerged at this time. Antimpampa's rich assemblage of artifacts, combined with the excellent preservation of its activity areas, present an opportunity for future excavations to understand how Early Horizon centers worked as engines of integration, identity formation, and ritual practice.

Bava De Camargo, Paulo

[158]

Revisiting the Archaeology of a Small Harbor: Cananéia (São Paulo, Brazil), Nineteenth–Twentieth Centuries

The presentation discusses the results of the author's PhD dissertation on nineteenth- and twentieth-century harbor sites in Cananéia, São Paulo State, Brazil, a period when the capitalist economy was introduced in the region. From the mid-nineteenth century until 1950, the harbors experienced a subtle but significant transformation that expresses the economic and political changes derived from Brazil's modernization. These coastal and underwater archaeological contexts herein focus—one stone wharf, a wreck site of a paddlewheel steamship, and two shipyards—have been delimited with mapping, registering, and extensive surveying using an approximation to Westerdahl's methodology and the reflection of J. Herrera and M. Chapanoff. This approach is especially important because it includes not only the analysis of ruined, abandoned, and buried remains as archaeological resources but also meanings, beliefs, land/seascapes, structures, equipment, and buildings that are still present in the current social context as active elements. The result of the research was the understanding that two main changes have transformed the economic dynamics of the region: the transition from the boat building and commercial agriculture to industrial fishing and tourism, and the substitution of maritime transportation, first by multimodal river navigation and railroad, and then by road transportation.

Baxter, Carey (US Army Corps of Engineers ERDC-CERL) and Anthony White (US Army Corps of Engineers, ERDC-CERL)

[326]

3D Documentation of Grave Markers for the National Cemetery Administration

The United States Army Corp of Engineers, Engineer Research Development Center, Construction Engineering Research Laboratory (ERDC-CERL) is home to one of the largest cultural resources research teams in the DoD. In recent years our team has assisted the US Department of Veterans Affairs, National Cemetery Administration (NCA) with their duty to provide perpetual care to the graves of US service personnel and veterans. Using high-definition terrestrial laser scanning (TLS) and photogrammetry, 3D documentation of grave markers facilitates the repair, restoration and/or replacement of military grave markers in cemeteries formerly under private or municipal management that have fallen into disrepair or are threatened by a changing environment. This presentation will discuss how leveraging 3D data collection and visualization is enabling cultural resource managers to build resiliency against the ravages of time and climate change in maintaining historic properties.

Baxter, Erin (Denver Museum of Nature & Science), Steve Nash (Denver Museum of Nature & Science), Michele Koons (Denver Museum of Nature & Science) and Deborah Huntley (Tetra Tech; Denver Museum of Nature & Science)

[111]

Mogollon Murk: Ideas for Some New Ways Forward through Collections and Collaboration (and a Little Fieldwork)

Emily Haury wrote, “[Mogollon studies are] . . . a currently confused state of affairs. Perhaps in another half century [it] will have reached a state of broad acceptability and equilibrium” (1983:xix). Forty years into the prognostication, have we made inroads? This paper will explore the Denver Museum of Nature & Science’s efforts toward that end in the Mogollon highlands. From new ¹⁴C dates from Tularosa Cave, to reanalysis of WS Ranch, survey north of the Forestdale Valley, excavation of an endangered great kiva (and its repatriation and reburial alongside Zuni and Acoma advisors), to new and tantalizing sites out of reach but not out of mind, we hope to add to syntheses pioneered in the region by Martin and Rinaldo and riffed on a new generation of regional archaeologists looking to cast off the murk. New dates, new methods, and new thoughts to put into the hopper.

Bayarsaikhan, Jamsranjav [151] see Égüez, Natalia
 Bayarsaikhan, Jamsranjav [151] see Ventresca-Miller, Alicia

Bazan, Augusto [242] see Vining, Benjamin

Beach, Isabel [67] see West, Catherine

Beach, Timothy (University of Texas, Austin), Sheryl Luzzadder-Beach (University of Texas, Austin) and Wilhemina Colón Loder (University of Texas, Austin)
 [125]

The Soils and Geoarchaeology of Aguada Fénix and the Middle Usumacinta Region

Three years of soil, water, and lidar analyses for the Middle Usumacinta Region indicate a diversity of soils, paleosols, and several areas of wetland rectilinear features that indicate a range of wetland farming and other uses. For the soils, we characterized soil profiles through excavations over more than 3 m depth, mapping stratigraphy, horizons, and paleosols. Our field and lab research on the soils aims to show soil formation, fertility, sediment sourcing, and broader geoarchaeology through geochemistry and stratigraphy in association with archaeological information. We analyzed soil texture, pH, magnetic susceptibility, XRF and ICP AES for elements, particle size analysis, LOI, C, N, P, S, and stable carbon isotopes. These analyses allow us to differentiate sediment sources, though the soils and sediments also reflect in situ weathering especially near the surfaces that have been exposed to the atmosphere for millennia. We present evidence of topsoils and paleosol Rendolls, Vertisols, and Oxisols buried under the largescale Middle Preclassic construction. We also consider the evidence for wetland fields and canals that are probably Classic period, using lidar visualization analyses and pattern comparisons with wetland fields demonstrated elsewhere for both the well-known Laguna de Términos field complex and other regional rectilinear canals systems.

Beach, Timothy [130] see Colón Loder, Wilhemina
 Beach, Timothy [295] see Luzzadder-Beach, Sheryl
 Beach, Timothy [130] see Smith, Byron

Bean, Daniel [197] see Recklies, Laura

Beardall, Antonio (Texas State University)
 [226]

The Impact of Belizean Archaeological Participation on Aspects of Cultural Identity and Cultural Heritage

Belize is a country rich in archaeological resources including Paleoindian, Archaic, the Ancient Maya, and colonial. Belize has been and continues to be the focus of archaeological research, largely conducted by foreign researchers that help facilitate archaeological field schools training primarily American, Canadian, and

English students. While many Belizeans are hired to work on these projects, they are not in a position to conduct investigations, analyses, nor produce/disseminate reports of their findings. Using ethnographic/qualitative methods, my dissertation research aims to investigate whether greater participation on an archaeological project has any impact on a young Belizean regarding (1) their sense of cultural identity, (2) their perception of a shared Belizean cultural heritage, and (3) their relation to the archaeological past. This paper outlines the proposed methodology, expected results, and why this form of community/collaborative research is essential for understanding the need of greater community/public components on foreign led archaeological projects in Belize.

Beardall, Antonio [295] see Peuramaki-Brown, Meaghan

Beardall, Antonio [295] see Robin, Cynthia

Beardall, Antonio [98] see Walden, John

Beasley, Melanie (Purdue University)

[236]

Chair

Beasley, Melanie (Purdue University)

[236]

Broader Impact of Archaeological Science Methods in Forensic Science Investigations

In 2009, the National Academy of Sciences report on “Strengthening Forensic Science in the United States” emphasized the importance of change needed in forensic science disciplines to ensure reliability, enforceable standards, and to promote best practices. Over the years many archaeologists and bioarchaeologists have assisted law enforcement with the recovery and analysis of human remains on an ad hoc basis with often little or no formal training in forensic anthropology. This presentation will review the value that archaeological science methods can contribute to forensic anthropology as an applied anthropology practice. In recent years, media coverage has highlighted cases where pseudoscience, unethical practices by unqualified individuals, and the unethical treatment of human remains had a negative impact to families, communities, and the discipline. The misidentification of animal remains as human because of a lack of qualifications or promoting the pseudoscience of dowsing rods to locate clandestine graves has lasting consequences in the public perception of what assistance trained forensic anthropologists can offer investigators. In this presentation, I argue that archaeologists who desire to assist in forensic investigations require a deeper understanding and ethical understanding of the broader impact their archaeological science methods have on the forensic anthropology community.

Beatrice, Jared [123] see McGuire, Sara

Beaulieu, Dawson (Stantec) and Mark Young (Stantec)

[49]

Systematic Data Recovery at Archaeological Sites in the McIntyre Creek Valley, Whitehorse, Yukon

This poster presents on the preliminary findings of systematic data recovery excavations at several archaeological sites within the city of Whitehorse, Yukon. These sites tentatively include JeUs-42, JeUs-43, and JeUs-96. Excavations were undertaken by Stantec during the 2023 field season; one site was partially excavated in 2010. Cultural materials recovered include microblade technology, bifacial technology, faunal remains as well as a thermal feature that likely predates the deposition of White River Tephra (~1500 YBP). Lithic material types include a variety of visually distinctive cherts, agate, and obsidian. Intrasite analyses are presented respectively. Intersite analyses and regional comparisons are also explored and are suggested to culturally correlate to a cluster of microblade sites located in the McIntyre Creek Valley, dating to the Early/Mid-Holocene. The distribution of these sites is presented. Findings suggest these sites may represent bison hunting and/or processing sites. The suite of sites explored in this poster further regional

understandings of the formation of cultural assemblages resulting from hunting activities within the Whitehorse subregion of SW Yukon.

Beaumont, Julia [22] see DeWitte, Sharon

Beaupre, Andrew (Maine State Museum)

[153]

Is It All Just Faience and Honey-Colored Gun Flints? Examining the Material Record of Eighteenth-Century French Culture in Multiregional Perspective

By the first quarter of the eighteenth century, the “blue crescent” of French land claims and settlement had spread across North America from the Acadian coast to southern Louisiana. While French colonial settlements existed contemporaneously throughout the middle of the continent, historians and archaeologists have tended to study these forts, trading posts, and communities either as isolated points or within regions that were defined by twentieth-century etic perspectives. While the environmental conditions of each community’s location played a role in the particular manifestation of French colonial society, there are commonalities across the continent. This paper compares the material record recovered from sites in the colony of Acadia located in the current state of Maine and one in the French colony of Louisiana in the current state of Arkansas to offer a line of evidence of a multiregional perspective of French colonial society.

Bebber, Michelle (Kent State University)

[257]

Discussant

Becerra, Gibrán (El Colegio de Michoacán)

[163]

Discussant

[216]

Chair

Becerra, Gibrán (El Colegio de Michoacán)

[216]

Ritual y sacrificio de cocodrilos en la ofrenda constructiva del Juego de Pelota de Tlalixcoyan, Veracruz

Trabajos de investigación sobre arquitectura dañada del Juego de Pelota realizados en el Complejo Monumental de Tlalixcoyan, Centro de Veracruz, permitieron documentar ofrendas de dedicación y múltiples etapas constructivas durante el Clásico. En una de las etapas iniciales, los constructores del Juego de Pelota realizaron el depósito de cocodrilos junto a otros elementos que enfatizan aspectos acuáticos y ceremoniales. Las evidencias indican que al menos un cocodrilo fue enterrado vivo en la construcción. En esta ponencia se exploran las implicaciones de este contexto para nuestro conocimiento acerca de la cronología, los rituales y la participación colectiva en el Juego de Pelota de la Costa del Golfo. [Research work on the damaged architecture of the ballcourt at the Monumental Complex of Tlalixcoyan, in central Veracruz, documented dedication offerings and multiple construction stages during the Classic period. In one of the initial stages, the builders of the ballgame made the deposit of crocodiles along with other elements that emphasize aquatic and ceremonial aspects. Evidence indicates that at least one crocodile was buried alive in the construction. This paper explores the implications of this context for our understanding of the chronology, rituals, and collective participation in the Gulf Coast Ballgame.]

Beck, Jess [173] see Poole, Anne

Beck, Robin (University of Michigan), David Moore (Warren Wilson College), Christopher Rodning (Tulane University) and Rachel Briggs (UNC-Chapel Hill)
[253]

Big Data and the Berry Site: Colonial Archaeology in the Carolina Foothills

From December 1566 to March 1568, Captain Juan Pardo established a network of six small garrisons extending beyond the Atlantic Coast through modern-day North and South Carolina and across the Appalachian Mountains into eastern Tennessee. The first of these, Fort San Juan, was built in the Appalachian Foothills at a Native town named Joara and was intended to serve as the base of operations for Spain's imperial designs in the interior of northern La Florida. The subsequent destruction of all six forts during an Indigenous uprising brought these imperial ambitions to an unexpected end. Although short-lived, Pardo's forts constitute the earliest Spanish presidio system in the Western Hemisphere. More than two decades of archaeological research at the Berry site in North Carolina have revealed the location of Fort San Juan and the Indigenous context of its construction, use, and annihilation. Much of our work at Berry, and particularly our understanding of this Indigenous context, derives from Dave Anderson's pathbreaking work on the Savannah River chiefdoms, and indeed, we suggest that the people of Joara were descended from the upper Savannah's Late Mississippian populations.

Beck, Robin [253] see Henry, Edward

Becker, Rory (EOU), Danny Walker (University of Wyoming) and Carolyn Buff (Wyoming Archaeological Society)
[177]

Geophysical Survey of the Fort Union National Monument

A multi-instrument survey of the Fort Union National Monument was conducted during the 2014 field season. The survey covered approximately 13.4 ha (33 acres) and was funded through a CESU grant with the National Park Service. The multi-instrument survey detailed evidence of intact, subsurface structural elements in the Civil War star fort component of the site. These data furthered the research efforts underway at the site and provides an enhanced interpretive experience for visitors.

Becker, Rory (EOU)
[247]

Chair

Becker, Rory [247] see Ahern, James

Becker, Rory [247] see Vidas, Lia

Becker, Sara (University of California, Riverside)
[205]

Modern and Ancient Craftswomen in the Andes, from Tiwanaku (AD 500–1100) to Present in Bolivia and Peru

This research investigates skeletal evidence of labor (i.e., osteoarthritis and muscle enthesal changes), as performed by 525 females within the precontact Tiwanaku civilization (AD 500–1100) of the Bolivian and Peruvian Andes, and compares these labors to those performed by their modern-day indigenous Aymara descendants who live in the same region and perform many traditional tasks (i.e., non-mechanized farming, carrying goods on the back over varying elevations, weaving, pottery production). Using ethnographic evidence from 20 interviews and 3D computer-aided video motion capture (mocap) of traditional activities, data from these women were compared to prior published skeletal evidence of Tiwanaku tasks. Results show that many of the tools used in prehistory, such as a sharpened and smoothed llama bone, are the same as those used over a thousand years ago during Tiwanaku times, and that intense labors, such as farming or craft production begins in pre-teen years in both the past and present. Overall, focusing on laborers from the past and present can answer question about gendered labor and the importance of Indigenous expert knowledge.

Becker, Sara (University of California, Riverside)**[238]***Discussant*

Becquey, Cédric [32] see Begel, Johann

Beeker, Charles [92] see Hawley, Kirsten

Beekman, Christopher (University of Colorado, Denver)**[11]***Discussant*

Begay, Skylar [88] see Doelle, William

Begel, Johann (UNAM, IIFL, Centro de Estudios Mayas) and Cédric Becquey (UNAM, IIFL, Centro de Estudios Mayas)**[32]***Stela and Altar Rituals: Caches, Inscriptions and Iconography in Tikal, Petén, Guatemala (AD 250–950)*

Mayan stelae and altars are a key epigraphic and iconographic source for understanding the political history of the Classic period (AD 250–900). Tikal produced a particularly large number of these monuments in a variety of architectural contexts: Twin Pyramids Groups, Plazas, Great Temples, residential groups, and even remote areas, probably corresponding to different events and ceremonies. To date, 70 caches have been discovered under 62 stelae and 5 altars, including 18 inscribed, 43 plain, and 6 removed in the ancient period. This corpus therefore lends itself particularly well to the study of the rituals associated with these monuments, which promoted the rulers' propaganda. The focus of this presentation will be on determining whether there were any caches specifically dedicated to the monuments. Epigraphy will shed some general light on the ceremonies surrounding the erection and dedication. Moreover, it will be interesting to determine whether a correlation exists between the messages put forward in the inscriptions, the text/image layout, the iconography, and the type of dedicatory cache. For all these approaches, it will also be important to evaluate the differences and variations depending on the architectural context and the event that led to the installation of these stelae and altars.

Beggen, Ian (University of Michigan)**[20]***Chair***Beggen, Ian (University of Michigan)****[20]***Utilizing Drone Modeling to Facilitate Targeted Pedestrian Survey in Central Western Patagonia*

Regional archaeological survey is notably difficult in continental Aysén, Chile. Many researchers mark the difficult terrain and dense vegetation of forest and forest-steppe biomes of this region of Central Western Patagonia as major factors limiting our ability to identify new archaeological sites. Thus far, most sites identified across the region are rockshelters, and this trend in survey results is likely due to our relative inability to identify open-air sites in hard to reach areas. Recently, methods such as remote sensing (i.e., magnetometry) have been utilized successfully to identify buried archaeological sites. However, regional magnetometry survey can be quite expensive. In this project, I utilize a less cost-prohibitive method to identify ideal landforms for subsurface archaeological testing. Using drone modeling of a 10 km² area of

forest-steppe ecotone adjacent to the Ibáñez River Valley (IRV), I employ a method of targeted subsurface survey to better identify buried archaeological sites. In this presentation I report the results of this survey and discuss possible outcomes for our understanding of this relatively-understudied area of Patagonia, particularly relating to settlement patterns, environmental marginality, and perceived chronological gaps.

Beggen, Ian [266] see Perkins, David

Beightol, Charles [329] see Rich, Megan

Beisaw, April (Vassar College)

[275]

Chair

Beisaw, April (Vassar College)

[275]

Taking Their Water for New York City: Archaeology of Reservoir Communities

It took New York City more than 100 years to construct its system of 19 reservoirs and controlled lakes. Archaeological survey of city-owned lands around these artificial water bodies reveal the ruins of what once was. Collaborations with community members and partnerships with local libraries, historical societies, and community cemeteries help to make sense of the dramatically altered landscapes. Together we have built new understandings of the local impacts of water harvesting and redirection. Reservoir creation can be a violent act that displaces people, plants, and animals. It can also create new habitats and places of wonder.

Belardi, Juan (Univ Nac de la Patagonia Austral), William Taylor (University of Colorado, Boulder), Luis Borrero (Universidad de Buenos Aires, CONICET), Luciana Stoessel (Universidad Nacional del Centro, CONICET) and Sabrina Leonardt (Instituto Nacional de Antropología)

[77]

A Tehuelche/Aonikenk Camp on the Northern Bank of the Middle Course of the Gallegos River (Santa Cruz Province, Patagonia, Argentina): Implications for the Use of Space in Historical Moments

The Mack Aike Canyon has been redundantly used by hunter-gatherer populations for at least 3300 years BP. The canyon provides protection, water, pastures, and fauna. Information corresponding to the Chorrillo Grande I site is presented, where lithic artifacts were found together with others made of glass (Venetian type beads and scrapers), metal—brass and iron—(ornaments, nails, and fragments), ceramic potsherds, and archaeofauna, mainly guanaco (*Lama guanicoe*) and horse (*Equus caballus*). The chronology obtained on remains of these fauna and potsherds goes back to the last 300 years BP. In addition, the distribution of the archaeological record follows a linear pattern that, together with the location in a canyon, conforms to the ethnographic information on the arrangement of toldos. The late artifactual signal has also been identified in other contexts of the canyon but at a very low frequency. The information allows us to interpret the site as a Tehuelche/Aonikenk camp and compare it with other sites in the extreme south of Patagonia with similar characteristics. Along with other sites in the Mack Aike Canyon, Chorrillo Grande I shows the persistent use of the locality and its role as an articulator of regional mobility until historical moments.

Belardi, Juan [260] see Taylor, William

Belardi, Juan [281] see Luchsinger, Heidi

Belcher, Megan (Washington University, St. Louis), Christina Youngpeter (Washington University, St. Louis), Natalie Mueller (Washington University, St. Louis) and Alleen Betzenhauser (Illinois State Archaeological Survey)

[202]

*Goosefoot Galore: Results from the Analysis of a Goosefoot (*Chenopodium berlandieri*) Cache in the American Bottom*

In precontact eastern North America, Indigenous peoples domesticated a unique crop system called the Eastern Agricultural Complex (EAC) before the arrival of maize (*Zea mays*). The EAC likely sustained past Indigenous populations beginning around 3900 BP, to approximately 600 BP. The EAC fell out of cultivation prior to European contact, so their domesticated forms only exist in the archaeological record. This poster focuses on one of these lost crops: goosefoot (*Chenopodium berlandieri*), a small-seeded, annual plant similar to quinoa (*Chenopodium quinoa*). Recent fieldwork at the Danny site (11S870), a multicomponent bluff-top settlement overlooking Silver Creek in the uplands east of the American Bottom, revealed a cache of approximately 275,000 charred seeds. We will conduct a morphological analysis of this seed cache focusing on seed diameter and testa (seed coat) thickness to explore the developmental plasticity present within this population. We will then compare our analysis to other goosefoot caches found across eastern North America. This study will contribute to recent goosefoot research that reframes its evolutionary history, and further illuminates the intricacies of past peoples' relationship with this crop.

Belcher, William (School of Global Integrative Studies/Anthropology), LuAnn Wandsnider (University of Nebraska, Lincoln), Ella Axelrod (University of Nebraska, Lincoln), Gargi Jani (National Forensic Science University, Gandhinagar) and Koel Mukherjee (Anthropological Survey of India)

[105]

Deep Stratigraphic Deposits: Pond Scum, Aircraft Wreckage, and Safety in Assam, India

Stratigraphy is an important part of understanding the history and land use of any archaeological site, but it is exceptionally important in understanding sites associated with US missing service personnel. Understanding the stratigraphy and pedogenic processes of a recovery site/scene allows the lead archaeologist to make informed decisions about the extent/depth of excavation as well as the direction of excavation. This understanding guides the excavations to the areas that appear to have the highest likelihood of recovering probative materials associated with missing US service members. An important aspect of the study of stratigraphy is to interpret the land-use history of these recovery scenes, including the original incident related archaeosediments and various taphonomic processes as well as natural and cultural depositional/ erosional sequences that are necessary to reconstruct the land use and modification of incident-related sequences. Examples from the recent (December 2022–January 2023) excavation in Assam, India, illustrate the compromise of excavating and interpretation regarding a large US aircraft crash site as well as maintaining safety protocols for deep excavations.

Belcher, William (School of Global Integrative Studies/Anthropology)

[148]

Chair

Belcher, William [148] see Klemm, Maggie

Beliaev, Dmitri (Knorozov Mesoamerican Center, Russian State University for the Humanities), Simon Martin (University of Pennsylvania Museum) and Sergei Vepretskii (Institute of Anthropology and Ethnology, RAS)

[159]

“Serpent Emperor” and “Serpent Co-ruler”: New Evidence on Kanul Hegemony under K’ahk’ Ti’ Ch’ich’

In 2017 previously unknown mid-sixth-century Kanul king K’ahk’ Ti’ Ch’ich’ Aj Saakil was identified in Classic Maya hieroglyphic inscriptions. He acceded as “high king” (*kalomte*) in AD 550 and was responsible for the defeat of Tikal in AD 562 and the expansion of Dzibanche hegemony through the Southern Lowlands. New reference to K’ahk’ Ti’ Ch’ich’ recently found at Chochkitam and dated to AD 568 as well as revision of the

inscription on Caracol Altar 21 show that his reign as high king continues longer than we believed, for about two decades, and that his successor “Sky Witness” for a decade could be a co-ruler. In the paper, we propose to reconsider the co-rulership model of the political organization of Kanul hegemonic polity. We also discuss the reference to K’ahk’ Ti’ Ch’ich’ as the overlord of the Tikal king and ceramic texts from the early Tepeu I phase (AD 550–600) that mention various lords claiming the title of “divine Mutul kings” in order to understand whether the Kanul ruler controlled Tikal and Tikal region after AD 562.

Beliaev, Dmitri [159] see Tokovinine, Alexandre

Belisle, Veronique (Millsaps College) and Hubert Quispe-Bustamante (ZUAYER Consultores y Ejecutores)

[286]

The Wari Occupation of the Site of Kaninkunka in the Cusco Region of Peru

The nature of Wari presence in the Cusco region of southern Peru during the Middle Horizon (600–1000 CE) is debated. In this area, the Wari state built large installations at Pikillaqta and in the neighboring Huarro Valley. Excavations in the Wari colony have demonstrated the strong Wari identity of its occupants along with their political ambitions, while excavations at sites outside the colony suggest that people living in villages further away were little affected by Wari presence. To further document the nature of Wari presence in Cusco and examine the relationships between Wari colonists and local communities, we excavated at Kaninkunka in the Huarro Valley. Unlike previous descriptions of the site as a Tiwanaku pyramid, our fieldwork revealed several Wari monumental structures, including a niched hall and a series of conjoined rooms. In addition, we uncovered many artifacts of Wari manufacture, such as Wamanga and Chakipampa pottery, large obsidian projectile points from the Quispisisa outcrop, turquoise-colored beads, and worked *Spondylus*. Results indicate that Kaninkunka was a Wari space used for non-domestic purposes. The small proportion of local material culture further suggests that its occupants sometimes interacted with local communities, albeit at a much smaller scale than those at Pikillaqta.

Belknap, Lori [154] see Boles, Steve

Bell, Karen

[129]

Mesoamerican Queens, Revisited

This paper builds on the author’s earlier research that documents previously unrecognized female rulers among the Aztec. Over the last 50 years, interest in elite women in other areas of Mesoamerica has grown, and the author presents the outcome of some of that research. Woman rulers from not only the Aztec area but also from the Valley of Oaxaca and the Mayan region are discussed. In addition, the author briefly relates her experiences as the only woman on a field crew doing settlement pattern work in 1968 in the Teotihuacan Valley as part of Bill Sanders’s larger Basin of Mexico project.

Beller, Jeremy (Simon Fraser University), Kaia Carr-Meehan (University of Victoria), Maysoon al-Nahar (University of Jordan) and Mark Collard (Simon Fraser University)

[281]

Potential Refugia in the Levant during the Pleistocene and Their Use by Hominins

Interest in the possibility that refugia have played an important role in human evolution has grown in recent years. A refugium is a relatively small area in which a population may be able to survive during a period of unfavorable conditions. Here, we report preliminary results of a study that is seeking to identify refugia in the Levant that were occupied by Pleistocene hominins. In the Levant, the main constraint on mammalian occupation has been, until recently, the availability of water. Hence, we focus on areas that likely had stable sources of water over long periods of time. We are reviewing geohydrological evidence to identify such

areas; to attach dates to the areas' refugial phases; and to correlate these phases with the global climate record. We are also examining archaeological evidence to ascertain when hominins occupied the areas in question. So far, we have identified over a dozen potential refugia across the Levant. The data indicate that the refugial phases are not always synchronous or correlated with global climate patterns. The data also indicate that some of the potential refugia are on the frontiers of the Levant, which raises the possibility that they could have facilitated hominin migration into Eurasia.

Bellipanni, Kayla [94] see Farmer, Reid

Bello, Charles (Federal Emergency Management Agency [FEMA-DHS])

[313]

Discussant

[150]

Chair

Bello, Charles (Federal Emergency Management Agency [FEMA-DHS])

[150]

Collaborative and Community Archaeology: A View from Europe

Community archaeology from a European perspective—comparative analysis.

Bello, Jose [81] see Cusicanqui, Solsire

Bellorado, Benjamin (Arizona State Museum, University of Arizona)

[60]

Chair

Bellorado, Benjamin (Arizona State Museum, University of Arizona)

[60]

Dating Stylistic Change in Ancestral Pueblo Building Mural Traditions in the Southern Bears Ears and across the Northern Southwest

Mural decorations on buildings can be used to express shared identities and cosmologies at a variety of scales. Stylistic links between murals at sites can reveal connected networks of practice within and between regions. Most prior studies focused solely on murals from a single structure or site that are dated at a relative-scale using ceramic cross-dating. Additionally, few prior studies compare murals across large social landscapes over time. This study focuses on the development of spatial and temporal seriations of Ancestral Pueblo mural styles across the northern Southwest using newly developed methodologies for dating the creation and use of building decorations. Based on recently obtained and legacy dendrochronological data, and using the Cedar Mesa area of the Bears Ears National Monument as a case-study, I demonstrate the methods used to create mural-stylistic seriations at the site- and subregional-scales. Then, I apply similar methodologies to legacy data at the regional-scale to develop spatial and temporal stylistic seriations of murals for the larger San Juan River Drainage. Using these data, I revisit previous theoretical frameworks, combined with ethnohistoric accounts relating indigenous perspectives, to explain the role of building murals during the mid-Pueblo II (AD 1050–1150) and Pueblo III periods (AD 1150–1300).

Bellorado, Benjamin [14] see Heller, Eric

Belmaker, Miriam [113] see Edwards, Timothy

Belmaker, Miriam [268] see Jennings, Madeline

Belmaker, Miriam [278] see Schumacher, Emily
 Belmaker, Miriam [145] see Williams, Patricia

Belmar, Carolina [77] see Urbina, Simón
 Belmar, Carolina [77] see Reyes, Omar

Belmiro, Joana (ICArEHB), Jovan Galfi (ICArEHB, University of Algarve), Xavier Terradas (CSIC), Nuno Bicho (ICArEHB, University of Algarve) and João Cascalheira (ICArEHB, University of Algarve)
[162]

Local or Exogenous? The Different Facets of Chert during the Gravettian at Vale Boi (Southwestern Portugal)
 Hunter-gatherers relied strongly on lithic raw materials, making them essential to characterize mobility and land-use, raw material provisioning, technology, social organization, exchange, and the functioning of social networks. As such, the characterization of hunter-gatherer lifeways is often the result of the combination of data obtained from autochthonous and allochthonous raw materials. Ongoing raw material studies at Vale Boi (an archaeological site located in southwestern Iberia) show local and exogenous chert raw materials for its Gravettian occupations. Identifying patterns of raw material use during this techno-complex, and especially the possible existence of social networks based on exogenous raw materials, may be a key aspect to understanding the Early Upper Paleolithic expansion in south Portugal, especially when previous works have suggested a possible ethnographic boundary between hunter-gatherer groups. This paper presents the chert raw material analysis results from the Gravettian levels of Vale Boi from the Terrace area. The archaeological chert artifacts were analyzed through a multi-layer approach (macroscopy, petrography, and geochemistry) and compared to a regional reference collection. Technological data was combined with the raw material results. This allowed us to better characterize the behaviors of chert obtainment, and their place within the technological or social organization of Gravettian hunter-gatherer communities.

Ben Amara, Ayed [240] see Alloteau, Fanny

Benallie, Larry [88] see Guebard, Matthew

Benavides Imbachi, Marcela [220] see Giraldo Tenorio, Hernando

Benazzi, Stefano [334] see Esposito, Carmen

Benden, Danielle (Driftless Pathways, LLC)
[305]

If We Build It, Will They Come? A Community of Practice for Archaeological Repositories
 In 2021, caretakers and users of archaeological collections participated in a Wenner-Gren funded workshop that considered the social lives of archaeological repositories. The goal was to understand the repository as a site of social relations among and between stakeholders. Together, collections managers, curators, and archaeologists representing tribal, government, CRM, and academic sectors considered the fundamental roles of the repository for the stakeholders they serve. Workshop participants identified the elements that unite repositories beyond curating collections. One of the outcomes was to explore whether repositories and their stakeholders would benefit from a more collaborative system of information sharing through the establishment of a Community of Practice (CoP) or a Repository Collective. This paper considers the creation of a CoP for archaeological repositories, its benefits, and potential barriers to its formation. A CoP

could be a platform for interaction, a portal for best practices with an emphasis on sustainability, and a means to developing new solutions to common problems.

Bender, Katharine (College of William and Mary), Joseph Jones (College of William and Mary), David Sevestre (College of William and Mary), Michael Blakey (College of William and Mary) and Jack Gary (Colonial Williamsburg Foundation)

[16]

Humans Remain: Bioarchaeology and Community at the Historic First Baptist Church of Williamsburg

We present the results of osteological analysis of human remains excavated at the original site of the historic First Baptist Church of Williamsburg, Virginia. The goals and parameters of our analysis were defined through a process of public engagement evolved from the ethical framework of the New York African Burial Ground Project. Limited by poor preservation conditions, skeletal and particularly dental assessment nonetheless yielded information deemed vital by community members. We determined the ancestral remains of three excavated individuals to be those of a late teen of indeterminate sex, an adult male, and a probable adult male. The presence of dental caries, calculus and hypoplasia suggests overall poor dental health, and abnormal occlusal wear for one individual (Burial 13) indicates his possible occupational use of the dentition. Most importantly, our findings helped to confirm the African American descendant community's long-held claim to the site and rich legacy of one of the nation's oldest churches. This project demonstrates both the value and potential of publicly-engaged bioarchaeology as a means of community creation, engagement, and empowerment. ***This presentation will include images of human remains.

Bender, Katharine [16] see Sevestre, David

Benedetti, Michael [247] see Carvalho, Milena

Benjamin, Jonathan and Michael O'Leary (University of Western Australia)

[263]

Recent Developments from the Submerged Cultural Landscape of Murujuga Sea Country, Northwest Shelf (Dampier Archipelago), Western Australia

In 2020 the Deep History of Sea Country project team published the discovery of two underwater archaeological sites in Murujuga Sea Country (Dampier Archipelago), Western Australia. Further lab analysis and field-based observations have been since undertaken, and these contribute to our understanding of the submerged sites within the broader setting within this rich cultural landscape. An update to our initial field observations will be provided with special reference to site formation and preservation on the submerged continental shelf. A brief discussion will be undertaken regarding heritage protection, as these sites represent a case study application for the protection of Indigenous underwater cultural heritage in Australia with wider implications for tropical environments around the Asia Pacific Region.

Benn Torres, Jada [70] see McCormack, Katie

Bennett, Matthew [35] see Reynolds, Sally

Benson, Erin [328] see Rankin, Caitlin

Benson, Erin [140] see Youngpeter, Christina

Bentley, Nicholas (Texas A&M University)**[316]***Late Quaternary Site Formation Processes and Archaeological Site Preservation Potential of the Lower Aucilla River, Florida*

For more than four decades the lower Aucilla River in northwest Florida has been recognized for its impressive late Pleistocene archaeological site preservation and its potential to further our understanding of Americas earliest indigenous inhabitants. Within the mid-channel collapse sinkholes of this river, dozens of late Pleistocene archaeological sites lie inundated in both surficial and buried contexts. However, only three of these sites have been thoroughly investigated, including the 14,550-year-old Page-Ladson site. While it has been demonstrated that dateable late Pleistocene deposits containing in situ archaeological material are present within the mid channel sinkholes of the Aucilla River, the extent of these deposits and the late Pleistocene site preservation potential for much of the lower Aucilla River still remains unknown. This paper discusses recent research focused on the geoarchaeological investigation of seven mid-channel sinkholes within the lower Aucilla River through sediment coring, geoarchaeological excavation, and high-precision radiocarbon dating.

Benzonelli, Agnese [118] see Campos Quintero, Lina

Benzonelli, Agnese [118] see Vieri, Jasmine

Beramendi-Orosco, Laura (Instituto de Geología, UNAM) and Galia González-Hernández (Instituto de Geofísica, UNAM)**[152]***Chronology of the Post-Teotihuacan Occupations in the Teotihuacan Valley*

The moment of the collapse of Teotihuacan and the subsequent occupation of the area by other cultures are still subjects of debate concerning this important urban center in Mesoamerica. Understanding what happened after the collapse and dating the different reoccupations of Teotihuacan can be challenging due to different factors, including the reuse of building materials and looting during Postclassic and modern times that resulted in altered archaeological contexts or significantly mixed dates for the samples. A Bayesian approach integrating radiocarbon dates and detailed archaeological information can help to overcome these difficulties. In this contribution we will present the process of building a high-resolution chronology for the tunnels located to the east of the Pyramid of the Sun by the integration of 20 radiocarbon dates from “Cueva del Pirul” and “Cueva de las Varillas” with detailed archaeological information on the context for each dated sample, including ceramic styles. With the resulting chronology it is possible to distinguish the moment of the different occupations during the Epiclassic and Postclassic times, helping to refine chronologies based on ceramic styles and to understand the population dynamics in the area.

Bérard, Benoît [257] see Siegel, Peter

Berg, Gregory [236] see Chesson, Lesley

Berg, Gregory [70] see Maass, Claire

Berg, Gregory [337] see Stantis, Chris

Berganzo Besga, Iban [256] see Pugliese, Melanie

Berger, Jackie [300] see Garcia-Putnam, Alex

Bergevin, Jesse [72] see Woods, Julie

Bergman, Christine [310] see Kelley, Alice

Berikashvili, David (International Archaeological Center of the University of Georgia)
[62]

Medieval Fortifications of the Mountainous South Caucasus (Zakagori Fortress in Truso Valley, North Georgia)
Zakagori fortress in Truso Valley, Northern Georgia (South Caucasus) represents unique medieval complex which was controlling military and economical routs leading from the South to the North in medieval times. This unique complex is known as an architectural and archaeological monument, which combines stratas and sediments of High and Late Medieval periods. Archaeological and multidisciplinary studies of the site in 2018–2019 gained priceless archaeological and historical information about a lifestyle and habit of the inhabitants of the mountainous Caucasus of these times. The results of the multidisciplinary studies will be presented on the presentation, as well as the single archaeological artifacts associated to the everyday life, medieval medicine, and craft of the mountainous Caucasian communities.

Berim, Anna [190] see Zimmermann, Mario

Berini, John, III [337] see Briggs, Emily

Bermann, Marc [283] see Messinger, Emma

Berna, Francesco [285] see Hollenback, Kacy

Bernard, Hayden (Indiana University), Ryan Kennedy (Indiana University), Eric Guiry (Trent University) and Peter Sauer (Indiana University)
[200]

Building an Archaeological Record of Over Three Centuries of Turtle Use Across the Chesapeake Bay Region
Archaeological and historical data speak to the importance of turtles in the Chesapeake Bay region, which includes the eastern portions of Maryland and Virginia and which serves as a home to nearly 20 species of terrestrial, freshwater, and marine turtles. Despite the many roles that turtles played in pre- and post-contact communities in the area, there has been no systematic effort to examine long-term temporal and/or geographic variability in past human use of turtles in the Chesapeake Bay region. In this poster, we address this critical research gap using zooarchaeological and stable isotope data from turtle remains recovered from a number of archaeological sites in Maryland and Virginia that span the seventeenth through late nineteenth centuries. We highlight trends in the use of individual turtle species through time, including reliance on freshwater pond turtles across multiple time periods and the importance of brackish water diamondback terrapins, especially in nineteenth-century sites. We also discuss insights into turtle harvesting practices and historical ecology of turtles in this dynamic region. Ultimately, we highlight not only how turtles were used in the Chesapeake Bay region but also consider how best to approach archaeological turtle analysis more broadly.

Bernard, Julienne
[304]

The Sampling Was Done in the Field: JEA as Scholar and Mentor in Context

This paper examines and celebrates the scholarship of Jeanne Arnold within her life as a friend, colleague, and

mentor. Coming of age in a decidedly masculine and sometimes antagonistic era of California archaeology, Jeanne emerged as a leading and respected scholar in the study of complex hunter-gatherer-fishers. In this environment, and maybe in response to it, she approached data collection and analysis with methods that were extraordinarily careful, rigorous, and precise. In both mundane and profound ways, Jeanne personified these same qualities herself, applying similar levels of meticulousness and tenacity in her other roles as professor and mentor as she did to her fieldwork and analysis. In this paper, I consider the ways that Jeanne's methodological dispositions, personality, and personhood were intertwined, and I invite attendees to consider this exceptional archaeologist's influence on a more personal level. With this, I hope to promote a more holistic perspective on academic legacies and encourage an examination of the diverse lasting impacts each of us has on the field and on each other.

Bernardini, Wesley [269] see Solometo, Julie

Berner, Jack (Washington University, St. Louis), Denis Sharapov (University of Tyumen), Andrei Logvin (Kostanay State University) and Irina Shevnina (Kostanay State University) [23]

A Multiscalar Geospatial Study of Bronze Age Landscapes in the Trans-Urals

The Late Bronze Age (2100–1400 BCE) of the Ural-Tobol interfluvium saw the emergence and decline of proto-urban fortified settlements occupied by pastoralists and metallurgists. These sites have been interpreted as centers for military defense, ritual-political nodes, strategic centers to protect natural resources or avoid environmental hazards, and aggregations of metallurgists or other craftspeople. By 1700 BCE, communities began to abandon these sites and adopted a less-centralized settlement pattern. Archaeologists still have not determined the extent to which shifts in metallurgical production, ecological change, inter-settlement conflict, and internal social change influenced this process. To better understand the process of centralization and subsequent disaggregation, I present the early stages of a multiscalar geospatial study that traces the layouts of Bronze Age settlements, as well as landscape use 2100–1400 BCE. I will first discuss the fortified site of Kamysty, Kazakhstan, and the results of handheld lidar and GPR scanning in the summer of 2023. I then expand my scope to the entire Kamysty-Ayat River Valley, using satellite images to identify potential Bronze Age sites and ecological features. Finally, I discuss novel approaches to studying the broad settlement system of the Ural-Tobol interfluvium, utilizing a large satellite image dataset and cloud-computing technology.

Bernstein, Bruce (Tribal Historic Preservation Officer, Pueblo of Pojoaque) [167]

Historic Tewa Pottery 1600–1800 and Social Survivance

Pottery making over the long arch of Tewa history is episodic; social changes bringing small and large-scale modification and sometimes transformation to pottery forms and iconography. Pottery, or more precisely, its aesthetics and production are ritualistic, serving as a critical and material conceptual ideal of the Tewa world. And, significantly, pottery is a social tool, whether mediating Tewa people's settlement on new lands during the fourteenth century, adaptation to Spanish colonization, or to the onset of the cash economy and twentieth market for Pueblo art pottery. As Tewa people remind us, "Our history is recorded in pottery." Most Tewa pottery studies use stylistic analysis or typological studies, one pottery type instinctively leading to the next. This suggests an absence of sentience by the potters and sui generis basis for understanding Tewa culture. And, in particular, when approaching pottery this way we are more apt to input outsider knowledge over that of Tewa people's own sentience, a long habit of colonial powers and academic disciplines. Historic pottery is rarely studied and imperfectly understood, existing as archaeological sherds and whole pottery in museum collections. My discussion brings together disparate collections with fresh ethnographic inquiry

Bernstein, Jan

[97]

Discussant

Berquist, Stephen (Sewanee: The University of the South)

[76]

Chair

Berquist, Stephen (Sewanee: The University of the South), Aleksa Alaica (University of British Columbia) and Giles Morrow (Vanderbilt University)

[76]

Tecapa: Segmentary Organization as Sociopolitical Technology in the Transitional Period (AD 800–1000)

The site of Tecapa represents one of the few major Transitional settlements on the North Coast. Its occupation (~AD 800–1000) spans the waning of Moche influence and the coalescence of Chimú and Lambayeque culture. In fact, the spatial organization of Tecapa shares important principles with Sicán and closely parallels the configuration of Chimú ciudadelas, even as urban growth at Chan Chan obscures its early years. The relationship of Tecapa to Huaca Colorada thus offers important insights into persistence and transformations of Moche practices and the emergence of coastal Late Intermediate period polities. At Tecapa, this transition reveals a gradual, though definitive break with Moche traditions rather than the “collapse” of Huaca Colorada as a major center. The planned grid of Tecapa indicates a conscious reorganization of social space. The segmentary structure of the site articulated relations between lineages and balanced highland settlers with coastal natives across a monumental plaza. Archaeological assemblages show how the new organizational paradigms may have balanced different political interests. Moreover, the incorporation and renovation of Huaca Colorada suggests its resignification as an ancestral location shared by highlanders and costeños. Ultimately, we argue that Tecapa presages the later segmentary ayllus and parcialidades of the coast.

Berquist, Stephen [76] see Quiñonez, Patricia

Berquist, Stephen [76] see Maciw, Alannagh

Berrey, Adam (Sacramento State University)

[157]

Explaining Early Complex Society Development in Central America and Northern South America: Patterns, Variation, and Scales of Analysis

The early complex societies of Central America and northern South America were once widely recognized for their organizational and cultural diversity. Since that time, greater emphasis has been placed on their shared cultural traits, as revealed through genetic and linguistic data and patterns in material culture—the variation that was once so strongly lauded is now often seen as nothing more than regional manifestations of an overarching theme. But while research into these cultural affinities has enhanced our understanding of early complex societies in this part of the world, it has also led to unitary explanations of how those societies developed. Such explanations do not do justice to the rich organizational diversity that is evident in the archaeological record and obviates any opportunity to learn from what it can teach us about the processes of social change. Approaches are needed that account for this variation, and that distinguish between organizational and cultural processes, focus attention on the scales of analysis at which the processes of social change most strongly operate, and allow for a wider range of explanatory factors than what overarching, unitary explanations require.

Berruti, Gabriele [157] see Arce Buitargo, Tomas

Berry, James [257] see Kennedy, Jason

Berryman, Judy

[52]

Chair

Berryman, Judy, Tuesday Critz (New Mexico State University, Las Cruces), Gabriela Tepley (New Mexico State University, Las Cruces) and William Walker (New Mexico State University, Las Cruces)

[52]

Cottonwood Spring Pueblo (LA 175): A Multiethnic Community, Movement of People through Time and Place

In this paper we argue that Cottonwood Spring Pueblo was a multiethnic community similar to many other fourteenth-century village clusters in greater Pueblo World. Cottonwood Spring Pueblo (LA 175) consists of multiple pueblos and features grouped into Areas A–F along Cottonwood Wash on the western flanks of the San Andres Mountains. Variation in architecture, artifacts and site closure in these pueblos suggests they resulted from an aggregation of peoples from different places in the Jornada region. Room sizes, wall types and artifact patterns, in Areas A and B resembles those of pueblos to the northeast in the Sierra Blanca region. Several similar sites on the western flanks of the San Andres mountains (Horse Camp Draw, Fleck Draw, Cottonwood Wash) suggest a movement of these peoples into the area during the El Paso Phase. Other Pueblos in various loci of Area E on Cottonwood Wash, however, appear more similar to villages to the southeast like those clustered near Coe Lake. The Jornada Mogollon like that rest of the Pueblo World experienced dynamic changes during the fourteenth century and contributed to the variation in subsequent native communities of the historic era.

Berryman, Stan [38] see Arakawa, Fumi

Bertman, Sarah (CSU Northridge)

[237]

Chair

Bertman, Sarah (CSU Northridge)

[237]

Embracing the Research Potential: Geochemical Sourcing of Rhyolite Artifacts from Antelope Valley Orphaned Collections

For over 40 years, the orphaned archaeological collections excavated by Antelope Valley College (AVC) have remained underutilized and underreported—an untapped resource and oversight to archaeological investigations in the western Mojave Desert. Orphaned collections can be revisited repeatedly with new paradigms and varied analytical methods. This research serves as a geochemical provenance study of rhyolite artifacts from three village sites excavated by AVC. Cottonwood Creek (CA-KER-303), Skelton Ranch (CA-LAN-488), and Totem Pole Ranch, located in different areas of the Antelope Valley, were seasonally occupied prior to or during the Late Prehistoric period. Sourcing rhyolite—a local lithic material from the area—can directly relate to the discussion of cultural boundaries and spheres of interaction that took place among semi-sedentary hunter-gatherers who occupied these villages. A previous geochemical study of rhyolite from the Antelope Valley suggested cultural affiliations and patterns of interaction between different ethnic groups dictated access and procurement of rhyolite from two known formations— Rosamond Hills, located in Rosamond, CA, and Fairmont Butte in Lancaster, CA. By employing LA-ICP-MS, micro-samples of rhyolite groundmass will be analyzed to expand on previous research and identify conveyance strategies that reflect the technically useful features of rhyolite and patterns of local-regional intergroup exchange.

Bertrando, Ethan (California Military Department)**[270]***Incorporating Multiple Data Sources to Identify Social Boundaries in a Prehistoric Landscape: A Case Study from the Nacimiento River, Camp Roberts, California*

Archaeologists have long looked to material culture to identify the presence and geographic extent of cultures in the past. Despite this long history, there remains significant challenges with this direction of research. In this case study, archaeological evidence ranging from subsistence remains to nonutilitarian goods is coupled with ethnographic data to plot the shifting settlement territories in an area occupied by various indigenous groups over the last 2,000 years including the Northern and Southern Salinan as well as the Northern Chumash. The results contribute to our understanding of how this approach may be applied and what its limitations are.

Besaw, Courtney and Tracie Mayfield (University of Southern California)**[267]***Colonoware alongside Imported Ceramics: Overview of Post-self-emancipation Local Pottery Production on Providencia Island, Colombia*

Colonowares are often recovered at colonial period sites in the Americas where peoples of African descent resided, and are low-fired, made from locally sourced clays and flux materials, and can be plain or decorated. Many archaeologists suggest that the practice of making this pottery is an African-based craft, however Indigenous influences (particularly in colonial contexts) cannot be overlooked. The presence of colonowares provides important information about the lifeways of enslaved people and Maroons because these wares were produced and traded outside of the colonial industrial complex. Recent excavations on Providencia recovered colonoware sherds that were coiled/hand molded and open air fired, much like those collected in other Caribbean contexts. These ceramics appear to be made with local clay and include red rock and quartz—a material linked to the Maroons of the island via oral history. On Providencia, methods for producing colonoware likely resulted from a combination of historical memory of peoples of African descent and methods learned from interactions with Indigenous people from coastal and inland sites. These findings are in line with Providencia's oral history which places residents of African, Miskito, and European descent on the island since the early 1600s.

Beshkani, Amir [93] see Nymark, Andreas

Bess, Jennifer (Goucher College)**[88]***Indigenous Knowledge: Scaling the Impact of Archaeological Research Up, Out, and Across*

Traditional Ecological Knowledge (TEK) or Indigenous Knowledge (IK)—evolved and evolving from hundreds or thousands of years of observation and interaction with specific environments—has answered questions posed by geomorphologists and archaeologists, among others, attempting to identify architectural remnants. In the 1990s, Hul'q'umi'num' and W̱SÁNEĆ Coast Salish communities aided Parks Canada and scientists investigating hundreds of stone walls along British Columbia's coast. The resulting study and revival of Coast Salish clam gardens and the creation of the Clam Garden Network exemplify the ways in which IK not only bridges gaps in archaeological research, but scales and diversifies the significance of that research into issues of cultural sovereignty, sustainability, and biodiversity. In the United States, continued labors to understand, revive, and advance clam garden IK for present-day purposes stand alongside projects such as the joint venture of Iñupiaq experts and Fish & Wildlife Service personnel in researching weirs constructed for whitefish harvesting in Kotzebue Sound, Alaska. Each example demonstrates that IK is not simply an alternative framework for understanding the past, but an epistemological alternative to (western) frameworks and disciplines that have created silos of expertise at odds with complex problem-solving.

Best, Kaleigh, Jessica Spencer (Southern Illinois University, Carbondale) and Christopher Jazwa (University of Nevada, Reno)

[272]

Marine Shell from Burials in St. Henry's Cemetery (1866-1908), East St. Louis, IL (1866-1908)

In the nineteenth century, East St. Louis attracted immigrants to work in its centers of industry and was a hub for westward expansion. St. Henry's Cemetery in East St. Louis, Illinois was the prominent Catholic cemetery within the area, serving the community from 1866 to 1908. Supposedly relocated by 1926, the cemetery site was then developed into a National Guard Armory by 1952. Excavations in 2021/2022 revealed the presence of a large number of remaining burials in various states of interment, with over 75% of burials being intact. Of the 47 excavated features, a total of six were found to contain seemingly intentionally placed marine seashells. All features with shell were previously exhumed. This presentation examines the shells themselves, the burial status and possible demographic information for each of the interments found with marine shell and discusses possible hypotheses on why the shells were placed and by whom. Possible hypotheses involving ethnic heritage, religious associations, and symbolic transference of the soul are discussed with the latter being the most likely hypothesis in this case. Other examples of marine shell use in mortuary rituals are discussed. This presentation offers a glimpse into mortuary and cemetery relocation practices in Victorian East St. Louis.

Best, Kaleigh

[300]

Discussant

Best, Kaleigh [300] see Passalacqua, Nicholas

Betarello, Juliana [9] see Bueno, Lucas

Bethard, Jonathan [68] see Arroyo, Valerie

Bethard, Jonathan [68] see McGrath, Katie

Bethke, Brandi (University of Oklahoma), Sarah Trabert (University of Oklahoma) and Richard Drass (University of Oklahoma [Emeritus])

[260]

Horses in Early Wichita Communities: New Evidence from the Little Deer Site

In North America, the southern Plains exchange system after 1600 CE was a complicated and fiercely competitive network of fluid alliances, rival interests, and conflict in the middle of overlapping Southeast and Southwest cultural, economic, and physical power bases. Within this system, the Wichita people occupied physical and social spaces between different environments, exchange networks, Indigenous groups, and eventually European colonies for generations, controlling the passage of goods, people, and knowledge through their territories. Horses played a critical role in these exchange systems. During the eighteenth century, Wichita villages served as major Indigenous-controlled centers of the horse trade in a region that lacked the establishment of official European posts or an extensive rendezvous system. However, much of what we know about horses in Wichita communities comes from accounts of Euro-American colonizers or from the perspective of their more mobile allies and trade partners, which often downplay the significance of horses to the Wichita, as well as undermine their antiquity. This paper presents the results of our reanalysis of faunal remains from a seventeenth-century Wichita village called Little Deer in west-central Oklahoma. This work provides new evidence that horses may have reached the Wichita earlier than previously believed.

Bettinger, Robert (University of California, Davis)

[306]

Discussant

Bettinger, Robert (University of California, Davis)**[306]**

Environment versus Technology: Weighing the Drivers of Western North American Holocene Intensification

Environment and technology are the independent “givens” of Julian Steward’s model of cultural ecology wherein different techno-environmental combinations favor different subsistence, settlement, and organizational responses. While all parties concede the importance of both, the thrust of much recent archaeological research echoes the contemporary media narrative in which environment—specifically climate change—is dominant, which is in keeping with a long-standing theoretical treatments of simpler societies, hunter-gatherers in particular. In this view, while technology can transform hunter-gatherers into something else (e.g., agriculturalists), technological variation among hunter-gatherers is mainly facultative, responding to local conditions, making technology a function of environment, and turning Steward’s cultural ecology into environmental determinism. This, and the correlative emphasis on climate as the major driver of hunter-gatherer behavioral change, is not in accord with the facts, specifically western North American hunter-gatherer demographic proxies showing a “hockey stick” trajectory at odds with climate records and sharply skewed to the very late Holocene, with an inflection point coinciding with the appearance of the bow and arrow at about AD 500, which favored social formations impossible with the atlatl (e.g., the family band), entraining a cascade of technical and social innovations that transformed western North American hunter-gatherer landscape.

Betts, Matthew (Canadian Museum of History)**[259]**

Human-Shark Interactions in the Interior of North America: A Relational and Historical Perspective

In a previous article, Betts et al. (2012) explored the spiritual relationship between sharks and humans in the Atlantic Northeast. For peoples with relational ontologies, using, wearing, and trading shark teeth not only signaled a sacred relationship with the shark but also an identity embodied by this conspecific; namely, a way of life connected to the sea and its animals. However, for at least 2,500 years, extant and fossil shark teeth were traded from the Atlantic seaboard and Gulf of Maine into the interior of North America. The shark teeth occurred in Adena, Hopewell, and later Mississippian contexts from the Great Lakes to the Lower Mississippi and especially the Ohio Valley. Their trade and importance appear to have intensified over time, and they are especially prominent in Mississippian contexts, such as Cahokia, where effigies of the teeth may have also been created. What did these sharks and their teeth mean to people who had no direct relationship with the sea and its animals, and who had likely never seen a shark in their lives? This paper explores the meanings, social bonds, power, and histories embedded in shark teeth in interior North American contexts, from both relational and historical perspectives.

Betzenhauser, Alleen (Illinois State Archaeological Survey) and Madeleine Evans (Illinois State Archaeological Survey)**[282]**

Unsung Heroes of Cahokian Cuisine: The Materials and Methods for Nixtamalization in the American Bottom

People who rely on corn for significant portions of their diets must process it to improve its nutritional quality, or risk severe malnutrition. A common method historically employed throughout Mesoamerica and North America consisted of soaking corn kernels in an alkaline solution created from wood ash or burned limestone, a technique referred to as nixtamalization. Recent research on pottery and limestone recovered from the East St. Louis site (11S706) by the Illinois State Archaeological Survey during an Illinois Department of Transportation project has yielded intriguing new data indicating nixtamalization was also practiced in the American Bottom of present-day Illinois as Cahokia grew to prominence as the first and largest Indigenous city north of Mesoamerica (ca. 900–1100 CE). The results of a pilot study indicate corn was nixtamalized using such seemingly mundane materials as locally available limestone and crude pottery utensils known as stumpware. Here I present the results of this research, focusing on portable X-ray fluorescence analyses, morphological variability, and depositional contexts of archaeological samples of stumpware, and experimental use of stumpware replicas. Examining how corn was processed in this way reveals information concerning culinary choice, the development of new foodways, and the formation of community identities.

Betzenhauser, Alleen [202] see Belcher, Megan

Bever, Edward (SUNY Old Westbury)

[333]

Magical Treasure Hunting in Early Modern Wurttemberg: Spirits, Neurocognition, and Sociocultural Change

One of the most common forms of divination in early modern Europe was magical treasure hunting. In an era before banks, locks, and police were common, people often buried or hid valuables, and sometimes knowledge of the location was lost. Some people later stumbled upon these caches accidentally, but others sought them out. Some treasure hunters tried to use common sense to deduce their location, but far more employed magical implements and rituals to contact spirits thought to be connected with the treasure. The implements included dowsing instruments and ceremonial objects, while the rituals generally involved elaborate and protracted rites, and in a few cases inhaling smoke or powder. This paper will examine a series of treasure hunting episodes in the archives of the Duchy of Wurttemberg between 1600 and 1800, focusing particularly on those that involved ritual activities that appear to have induced in the participants altered states of consciousness in which they contacted spirits, and relating these activities and experiences to both the neuropsychology of ritual trance and the early modern duchy's evolving culture and society.

Bey, Bridget (Washington University, St. Louis) and Sarah Baitzel (Washington University, St. Louis)

[70]

Pubertal Development among Prehispanic Moquegua Valley Populations (Southern Peru, 800–1500 CE)

As a temporally bounded bio-social process, puberty offers a compelling topic to explore the lived experiences of past people. The onset and pace of pubertal development are shaped by nutritional, environmental, and social factors that reflect long and short-term childhood experiences. We investigate puberty as a flexible process shaped by multiple factors; specifically, how in the late prehispanic Andes (800–1500 CE) adolescent growth and development interacted with childhood health and environmental conditions. We present data on 217 individuals, 5–30 years old, from three skeletal collections recovered in the Moquegua Valley (southern Peru): Omo M10, Chen Chen M1, and Estuquiña M6. We establish and compare pubertal growth/development curves across Andean and global samples and investigate the long-term effects of stress on the life course. This research combines traditional osteological methods for estimating age-at-death, sex, and stature with recent methodologies for assessing pubertal growth and determining juvenile sex. The scope of our analysis allows for the reconstruction and comparison of early life course histories, and the opportunity to evaluate how physical and psychosocial stress affected puberty in the prehispanic Andes.

Bey, George, III (Millsaps College), Rossana May (Kaxil Kiuic AC), Tomás Gallareta Negrón (INAH), Kyle Winters (UMMC) and Magill Grunfeld (BRAP)

[261]

Upstairs, Downstairs: Excavations of a Throne Room and Kitchen in the Kuche Palace, Kiuic, Yucatán

Beginning around AD 800 the Puuc region experienced a major construction boom of monumental architecture, including large palace complexes. At Kiuic, in the Bolonchen region of the Puuc, the early Yaxché Palace (AD 550–800) was replaced by a much larger complex of structures, still under construction at the time of the center's abandonment around AD 1000. This paper examines the results of several field seasons of excavation of two important buildings associated with the later Kuche Palace, the throne room and the kitchen. Although examining a number of aspects of the late palace, the paper focuses primarily on a functional analysis of these two structures. What does a detailed excavation tell us about the archaeological function and history of these two structures? Are the two buildings actually the throne room and kitchen; if so, are similar structures found at other important Puuc cities. The throne room underwent significant modification over this 200-year period, suggesting a dynamic period of sociocultural development. The results of these excavations are finally considered in relation to the larger complex of buildings and plazas that formed the Kuche Palace and what this tells us about palace life in the Late/Terminal Classic period at Kiuic.

Bey, George, III (Millsaps College)**[292]***Discussant*

Bey, George, III [261] see Gallareta Cervera, Tomás

Bey, George, III [255] see Gallareta Negrón, Tomás

Bey, George, III [261] see Seligson, Ken

Bey, George, III [261] see Winters, Kyle

Bhattacharyya, Tiyas (University of Oregon)**[289]***Fauna from Funan: An Examination of Human-Animal Relationships at Angkor Borei, Cambodia (500 BCE–500 CE)*

This talk will discuss the preliminary results from a study focusing on the analysis of select faunal remains from the Early Historic/Pre-Angkorian site of Angkor Borei, Cambodia. Angkor Borei is one of Southeast Asia's earliest urban centers, located in the Mekong Delta region of southern Cambodia. It was also a prominent trading center from the late first millennium BCE to the first millennium CE. I will present fauna from burial, residential, and industrial contexts that were excavated as part of the Lower Mekong Archaeological Project (LOMAP). Initial identification by previous scholars found both wild and domesticated fauna along with all major local taxa (e.g., water buffalo, pigs, cattle, chickens, crocodiles, various species of deer, rice rats, fresh and brackish water fish species, elephants, etc.). By examining the types and proportions of animals excavated and comparing the dataset from select contexts at Angkor Borei, I will discuss proposed shifts in human-animal-environment interactions, and how these may coincide with diachronic changes in sociopolitical organization, the subsistence economy, and religious practices.

Biagetti, Stefano**[151]***CAMP: A New Project for the Study of Pastoral Archaeological Sites*

Pastoralism is now recognized as a smart economy for food production in drylands, especially in the current scenario of climate change, where natural resource variability is increasing globally. Outdated stereotypes about the inefficiency and irrationality of pastoralism are being reevaluated, and there is a shift in the old paradigms regarding the study of contemporary pastoralism. Simultaneously, the archaeology of pastoralism is gaining renewed attention due to the long-lasting and sustainable nature of documented pastoralist practices. However, the archaeological record of pastoral sites remains challenging to study using current archaeological methods. The recently ERC-funded project "(Re)Constructing the Archaeology of Mobile Pastoralism (CAMP): Bringing the site level into long-term pastoral narratives" aims at developing a widely applicable methodology for the study of pastoral archaeological sites that can augment our knowledge on past livelihood in drylands.

Bianchi, Rachele (University of Toronto)**[315]***Time to Reconsider: A Critical Assessment of How Different Interpretations of Variation in Late Chalcolithic and Early Bronze Age Central Asia Influenced the Establishment of Chronological Frameworks*

Periodization and the establishment of chronological sequences are integral parts of archaeological discourse. Not only do we use them to diachronically investigate patterns and changes in material culture, but we rely on presumed contemporaneity to discuss interaction and exchange. However, archaeological reconstructions of the past and established chronological frameworks are heavily influenced by differential approaches to interpretation of variation. In this paper I discuss interpretative differences and underlying assumptions of Soviet and Western approaches to the establishment of chronological sequences for Late Chalcolithic and Early Bronze Age Central Asia. By comparing the approaches to Yamnaya and Namazga periodization, I highlight the interpretative ramifications of different mental constructs, ideologies, and theoretical conceptions of the past.

Biar, Alexandra (CNRS - UMR8096 ArchAm)**[154]***Dugout Canoe: A Solution for Bulk Transport in Mesoamerica*

In a cultural area where geography conspires against ease of exchange, Mesoamerican societies discovered technical answers adapted to their needs. At a time when the exchange of merchandise and goods relied mainly on human transport, some civilizations such as the Olmecs, Mayas, and Mexicas turned to accessible, high-performance waterways. Monoxylo canoes seem to have met all technical, economic, political, social, and ritual expectations. Based on ethnohistorical, archaeological, and ethnographic data, I propose to shed some light on the particular case of bulk transport, in which these monoxylo canoes played a primordial role.

Bicho, Nuno (Universidade do Algarve), João Cascalheira (ICArEHB, Universidade do Algarve), Jonathan Haws (University of Louisville) and Mussa Raja (Universidade Eduardo Mondlane)**[126]***Low-Cost Centripetal Technology in the LSA of Southern Mozambique*

Centripetal lithic technology, including various forms of Levallois technique, is very common in the African MSA. This technology is commonly identified by prepared core technology, where striking platforms are fully prepared to produce a variety of blanks. In Mozambique, both Levallois and prepared discoidal cores are very common throughout all MSA assemblages, and since there are very few excavated and dated sites, those cores are commonly used as type fossils. However, during survey and then testing of various sites across southern Mozambique, a simplified discoidal core was found associated only with LSA. These cores present a typical discoidal flaking surface, but they do not show any platform preparation and they seem preferentially made on smooth cortical pebbles and cobbles. The aim of this paper is to present the results of the study of these cores from the sites of Txina-Txina (Massingir, Limpopo basin) and of Zimuara (Save basin) and to understand the degree of expediency of this “fake” discoidal technology and to grasp the link, if any, between the traditional MSA centripetal technology and this LSA method.

Bicho, Nuno [162] see Belmiro, Joana

Bicho, Nuno [225] see Haws, Jonathan

Bicho, Nuno [265] see Karrar, Osman

Biehl, Peter (University of California, Santa Cruz)**[38]***Chair***Biehl, Peter (University of California, Santa Cruz), Johannes Mueller (Christian-Albrechts-University Kiel, Germany), Carole Nash (James Madison University) and Heather Wholey (West Chester University)****[38]***Popularizing the Archaeology of Climate Change*

This paper will discuss the need to popularize the archaeology of climate change beyond our professional networks to the general public via museums and education as well as the media. We will discuss ways to translate the archaeology of climate change into actionable science to inform decision-making within a global framework of climate change action in the public as well as in intergovernmental panels, agencies, and associations. We will present the “Kiel Statement” (<https://www.jma.uni-kiel.de/en/research-projects/sacc/sacc-statement-2021.pdf>)—which is endorsed by organizations such as the European Association of Archaeologists (EAA), and ICOMOS, the SAA, and the World Archaeological Congress (WAC)—and discuss how it can be used for transformative climate action as it relates to archaeological heritage.

Biginagwa, Thomas [26] see Marshall, Lydia

Billingsley, Andrew [47] see Palomino Berrocal, Raul

Bilodeau, Anne-Julie and Taché Karine (Laval University)

[189]

Investigating Southeastern United States Early Pottery Uses through Lipid Residue Analysis

Recent archaeological evidence suggests that shell rings are not only potential origin points for pottery in North America, but also places where people lived and feasted. Techniques borrowed from analytical chemistry now allow archaeologists to test these hypotheses. Lipid analysis was conducted on 60 potsherds and 20 baked clay objects, the latter thought to have been used as boiling stones. These artifacts were uncovered at St. Catherines and McQueen, two well-known shell rings located on St. Catherines Island, off the coast of Georgia (USA), and occupied between approx. 4300 and 3800 years BP. Data obtained thus far suggest the presence of plant and animal-derived lipids in residues from both sites, but no contribution from aquatic resources. Also interesting are molecular signals from baked clay objects, which indicate they have been used for processing resources, a hypothesis so far untested by lipid analysis. These preliminary results allow for a better understanding of Late Archaic period foodways and early pottery uses in the southeastern United States.

Bingham, Brittany [131] see Kennedy, Ryan

Binning, Jeanne (California Department of Transportation)

[306]

Extended Temporal Overlaps of Atlatl and Bow Technologies in the Great Basin and Other Parts of North America

There is a large literature that discusses the prehistoric introduction of the bow and arrow into the various regions of North America. The dates of the introduction vary greatly. Erroneously, it is sometimes assumed that this “technological innovation” quickly replaced the atlatl and dart. However, there is a growing corpus of data that indicate, in some locations, that it took 1,500 years or more before the atlatl and dart were totally replaced. In most areas, the introduction of the new technology did not result in any immediate changes in technological tradition or economic practice. An examination of this transition in various cultural contexts provides insights into the factors that may have influenced the adoption of the bow and arrow.

Birch, Jennifer (University of Georgia)

[56]

Institutional Dimensions of Northern Iroquoian Confederacies and Implications for Contact Period Geopolitics

Confederacies have been under-theorized in the social sciences in comparison to discourses focused on state development as per socio-evolutionary paradigms. Confederacies do not serve to govern so much as to coordinate. This paper explores the practices, institutions, and ideologies utilized by late premodern Northern Iroquoian confederacies to coordinate collective action while preserving local autonomy. The Wendat confederacy originated as an alliance between two nations in the 1400s but expanded as other communities and nations were forced to relocate north due to conflict with the Haudenosaunee. The origins of the Haudenosaunee confederacy included highly formalized diplomatic protocols that facilitated mutual non-aggression and the raising up of sachems. While the historical development of each confederacy took place within an entirely Indigenous world-system, the variable network structures of each impacted how these large-scale collectives navigated the collision of Indigenous and European world-systems during early colonialism in sixteenth- and seventeenth-century northeastern North America, particularly with respect to the integration of newcomers and responses to European encroachment.

Birch, Jennifer (University of Georgia)

[155]

Discussant

Bird, Darcy (Washington State University) and Timothy Kohler (Washington State University)
[308]

Proxies for the Agricultural Demographic Transition: How Well Do Radiocarbon Time-Series Track Crude Birth Rates?
Following the adoption of agriculture, societies frequently experience several hundred years of dramatic intrinsic population growth, followed by a population stabilization or decline; together these patterns are called the Agricultural Demographic Transition (ADT). These patterns result from increased birth rates, which can be tracked through Crude Birth Rates (CBRs), followed by increased mortality rates. However, estimating CBRs from sets of human remains requires huge amounts of individual-level data, which are rare in archaeology given preservation issues and ethical concerns. Radiocarbon data is the most spatially ubiquitous archaeological data across the world. Downey and colleagues (2014) compared summed radiocarbon probabilities (SPDs) to juvenility indices in Europe to find a significant correlation between long-term population trends and radiocarbon SPDs. We return to the European ADT with updated radiocarbon data (Bird et al. 2022) and slightly different methods. Then, we expand this analysis to two regions with well-characterized CBR patterns, the US Southwest (Kohler and Reese 2014), and the US Midwest (Milner and Boldsen 2023). This analysis will aid arguments for the ethical treatment of human remains in areas with a long history of colonialism (Thomas and Krupa 2021) and generate a more well-informed understanding of the radiocarbon dates-as-data approaches for the ADT.

Bird, Darcy [107] see Gauthier, Nicolas

Bird, Douglas (Penn State University)
[301]

Discussant

Birge, Adam (University of Texas, San Antonio) and Thibault Saintenoy (Université des Antilles)
[171]

Lines to the Mountains: Investigations of LIP and LH Carangas Settlement Patterns and Geoglyphs
The Carangas, primarily located in modern day Bolivia, were a Late Intermediate period (LIP) group often associated with highland pastoralism and broader LIP traditions. They are also known for a series of colored adobe chullpas in the Rio Lauca basin and a network of linear geoglyphs called the Sajama lines which cover over 20,000 km². They have been compared to groups in the Lake Titicaca Basin, the neighboring Pacajes, and other Aymara groups in terms of use of *pukaras* and chullpas. However, the Carangas have been understudied until relatively recently and these comparisons might not best reflect the emerging data. This poster presents preliminary data on the highland Carangas settlement patterns with a focus on *pukaras*. Using data collected during pedestrian survey and review of satellite imagery, we examine the use of 62 *pukara* sites by the Carangas to assess the variety of roles that these places would have fulfilled from defense to ritual. We also examine evidence of field systems, routes, Sajama lines, and outlying settlements to assess site hierarchy and the role of hilltop fortifications.

Bischoff, Robert (Arizona State University)
[162]

Investigating Interaction through Multilayer Material Culture Networks in the Western Pueblos
Comprehending the dynamics of regional interaction requires a holistic perspective. One artifact type falls short in capturing the richness of societal behavior, particularly when considering a sole attribute, such as paint style. Archaeologists are constrained by the availability of material culture and data, data quality, and methodological limitations; however, this situation is improving. This study synthesizes expansive datasets from the US Southwest, encompassing architecture, ceramics, and obsidian, to illuminate transformations within the period AD 1100–1500. Projectile point data is limited by typological problems and availability, but this is overcome through a novel analysis using geometric morphometrics. The study region spans from the

Hopi Mesas to Zuni and to Tonto Basin and areas in between (west-central Arizona and parts of neighboring New Mexico). Network analysis is ideal for this combined dataset due to its focus on identifying relations between sites. Multilayer networks allow each type of material culture to be analyzed as separate layers in a single analysis. By employing this comprehensive dataset and innovative methodology, this study advances new understandings of transformative processes within the specified era.

Bischoff, Robert [308] see Hruschka, Daniel

Bischoff, Robert [323] see Padilla-Iglesias, Cecilia

Bishop, Caitlin (California Department of Transportation North Region)

[231]

Archaeological Investigations of “Alaska” at Tule Lake Segregation Center in Northeastern California: Findings from Ground-Penetrating Radar

Tule Lake Segregation Center (TLSC) was a place of incarceration for over 18,000 Japanese Americans, yet it remains one of the most understudied incarceration sites of the Second World War. This presentation is an addition to the thesis research “Archaeological Investigations of ‘Alaska’ at Tule Lake Segregation Center in Northeastern California.” The following research reveals the results of ground-penetrating radar (GPR) conducted along Block 81 of TLSC within a portion of the site known as Alaska. This research was able to confirm the location of the barracks, latrines, and recreational halls that have since been bulldozed and removed post incarceration as well as identify several subsurface anomalies. These features are vital to understanding the life ways and experiences of Japanese Americans during wartime incarceration. Such knowledge validates the Japanese American experience, informs the narrative on incarceration, and acknowledges the true history of the United States. In addition, this fieldwork was made possible with the collaboration of multiple agencies, stakeholders, volunteers, and Japanese American descendants.

Bishop, Jack (Harvard University), Roshan Paladugu (Microbiome Sciences Group), Kristine Richter (Harvard University) and Christina Warinner (Harvard University; Max Planck Institute)

[145]

Animal Exploitation Choices in Worked Bones at a Portuguese Chalcolithic Village

Both hunting and agropastoralism were important to the Iberian Peninsular Chalcolithic subsistence economy. However, questions remain about the relative exploitation of wild and domestic fauna. Vila Nova de São Pedro (VNSP) is a Portuguese Chalcolithic village site, first excavated by Eugénio Jalhay and Afonso do Paço from 1936 to 1967 and by the VNSP3000 project from 2017 onward. Analysis of faunal remains from both periods of excavation by the VNSP3000 project has revealed the presence of both wild and domestic species. Wild taxa at VNSP represent a larger proportion of the faunal material and have greater species diversity than at other Chalcolithic sites in the area, including species such as beaver, lynx, and bear. This presentation will summarize the analysis of worked bone samples from VNSP using Zoology by Mass Spectrometry (ZooMS). There are many worked bone artifacts from VNSP, but most are not taxonomically identified because of their high degree of modification. This work will allow comparison between the diversity of taxa used for worked bone and that of the full assemblage of faunal remains and may reveal the use of rarer species. These findings reflect the material exploitation choices made by the Chalcolithic people at VNSP.

Bishop, Jessica (University of Illinois, Chicago)

[200]

Shadowed Facts: How the Zooarchaeological Analysis of a Horse Skeleton within a University Teaching Collection Potentially Provides Insight into Early Chicago History and Equine Pathology

This presentation details a zooarchaeological analysis of a horse skeleton, stored unstudied for decades previous in a university teaching collection. Originating from an archaeological site outside of Chicago in

Cook County, Illinois, the skeleton displays notable pathologies and other osteological changes that potentially reflect its living use and conditions. While excavated from the site of the nineteenth-century Laughton Trading Post, the time and explanation for entering the archaeological record remains up for debate. Elaborating on skeletal and historical data, this study investigates multiple hypotheses regarding the horse's life history and potential significance within the context of the Laughton Trading Post and as a reflection of early Chicago history. This study also highlights the exploratory process utilized in connecting this specimen with its context as well as reinforcing the potential value in the reexamination of legacy collections.

Bishop, Katelyn (University of Illinois, Urbana-Champaign)
[122]

Analysis of the Faunal Remains from Holtun, Guatemala

The site of Holtun is a civic-ceremonial center located in the Petén region of Guatemala, occupied from the Late Middle Preclassic to the Terminal Classic period (600 BCE–900 CE). Excavations conducted between 2010 and 2017 have resulted in a mid-size vertebrate faunal assemblage and a large archaeomalacological assemblage, including marine shell, freshwater shell, and modified shell objects. In particular, this includes a large amount of freshwater shell from a single Middle Preclassic deposit. This paper presents preliminary results from the ongoing analysis of faunal remains from Holtun, including an analysis of the distribution of faunal remains, and an examination of particular contexts and deposits that yield insights into the human-animal relationship at the site of Holtun.

Bishop, Ronald [251] see Reents-Budet, Dorie
Bishop, Ronald [320] see Sullivan, Timothy

Bishop, Sarah (Auburn University, Montgomery), Hunter Bobbitt (Auburn University, Montgomery) and Megan LeBlanc (Auburn University, Montgomery)
[72]

Respecting the Past, Empowering the Present: NAGPRA, College Students, and Renewed Commitment to Indigenous Heritage

The archaeology lab at Auburn University at Montgomery (AUM) has seen several changes over the last year regarding updates to their policies, protocols, and practices associated with their Native American Graves Protection and Repatriation Act (NAGPRA) collections. Students were trained in a hands-on lab setting in both the legal details and the practical aspects of completing the NAGPRA process. The practices conducted by lab personnel focused on training undergraduate student assistants in the proper procedures for documenting NAGPRA collections, cultural sensitivity, and the decolonization of collections management practices. Involving students in NAGPRA initiatives is an important way to teach the next generation of archaeologists to be respectful and collaborative researchers. Our goal as a lab is to not only develop our own skills as NAGPRA professionals, but also to bring awareness to NAGPRA in the broader AUM community.

Bissett, Thaddeus (WSP USA)
[253]

Information Transmission Rates in the Early Colonial Southeast: Estimating On-Foot Travel Time over Established Native American Trails across the Region

Among the myriad contributions David Anderson has made to American archaeology are his multiple collaborations with researchers using GIS (including myself) to extract new and useful data from multiscalar and multitemporal spatial datasets. As a graduate student of his, I learned that new and valuable information can often be wrestled from older sources. This paper presents the initial results of work inspired by—and directly influenced by—David Anderson's advice and interests. Myer's *Indian Trails of the Southeast* (1928) contains a map depicting the "trail system of the southeastern United States in the early colonial period." The

map, purportedly sourced by Myer from hundreds of reports, depicts an extensive network of trails connecting various modern and historic locations. After digitizing the trails into a GIS environment, I used cost-distance and travel-time functions to estimate travel times between various key locations. The results provide a realistic basis for estimating on-foot travel time across the US Southeast, and a perspective on the speed at which information and materials could have moved around the region.

Biwer, Matthew (Dickinson College), Gwyneth Gordon (Arizona State University), Kelly Knudson (Arizona State University) and Beth Scaffidi (University of California, Merced) [288]

Isotope Analysis of Macrobotanical Remains from Quilcapampa La Antigua, Arequipa, Peru

The Middle Horizon (600–1000 CE) was a period of increased mobility in the south-central Peruvian Andes. Research has demonstrated that the Wari Empire facilitated the movement of people and resources, many of which traveled great distances to reach the hands of both Wari-affiliated and local communities. This paper presents the results of isotope analysis of desiccated macrobotanical remains recovered from the site of Quilcapampa la Antigua, a small Wari outpost located in the Sihuas Valley, Arequipa, Peru. The results of our analysis speak to the possible ways plant resources demonstrate local and distant connections that knitted Andean communities together. Comparing our results to other lines of evidence, we are better equipped to address mobility during the Middle Horizon and the importance of plants in the creation and maintenance of social relationships.

Bjorklund, Haley [282] see Sellet, Frederic

Bjornerud, Olav [123] see Leader, George

Black, Casey (University of Wyoming) [198]

Intentional Sustainability in Human Behavioral Ecology: Modeling Athabascan Caribou Predation

The paradigm of Human Behavioral Ecology (HBE) utilizes behavioral ecological models to understand the adaptive relationship between human behavior and the environment in which people reside. The introduction of intentional sustainability to HBE models benefits this paradigm by diversifying the factors that influence human behavior and developing a greater understanding of the relationships between people and their environments. Based on archaeological and modern information associated with Dene (Athabascan) predation of Alaskan caribou herds, an analytical model can be constructed to account for intentional sustainability as a contributing factor to forager behavior. The results of this model combined with the perspectives of modern stakeholders in caribou conservation, including Dene and non-Dene hunters, community sustainability organizations, and the US Fish and Wildlife Service, could be utilized to develop more effective modern caribou conservation that is informed by the archaeological record of the relationship between hunter gatherers and caribou.

Black, Casey [67] see Dutro, Kassandra

Black, Stephen (Texas State University) [332]

Chair

Black, Stephen (Texas State University) and David Kilby (Texas State University) [332]

Eagle Nest Canyon and the Ancient Southwest Texas Project

Eagle Nest Canyon joins the Rio Grande at Langtry, Texas, in the western Lower Pecos Canyonlands.

Despite its relatively short length, this storied box canyon contains a dense archaeological record representing at least 13 millennia of human activity and has seen intermittent archaeological investigation for almost a century. This paper introduces the canyon, its landowners, and its archaeological history. The authors are co-directors of the Ancient Southwest Texas Project (ASWT), an ongoing research program based at Texas State University. Since 2010, Texas State students and faculty have worked with colleagues, volunteers, and the landowners to carry out state-of-the-art archaeological investigation of rockshelter, terrace, and upland sites within and overlooking Eagle Nest Canyon. Key ASWT themes have been geoarchaeology, stratigraphic sampling, 3D photogrammetric documentation, archaeobotany, zooarchaeology, and earth ovens, following the motto “Low Impact, High Resolution.”

Black, Valda (Nez Perce Cultural Resource Program) and Erin Thornton (Washington State University)

[185]

Machays, Tombs, and Burials: The Complex Mortuary Landscape of Late Intermediate Period Sondor

The site of Sondor in the south-central Peruvian Andes is famously known as an Inca ceremonial center in Andahuaylas, Peru. Prior to Inca presence, Sondor was occupied by cultures from the Formative period to the Late Intermediate period (LIP), with the largest occupation by the Chanka during the LIP (AD 1000–1400). Previous excavations targeting Inca structures discovered adults with fatal injuries and child sacrifices (*capacochas*). Additional excavations in the Chanka habitation sector uncovered *capacochas* on household floors. This project presents the results of the 2017 excavations with two units on the ceremonial hillside and one in the household sector. Each unit was unique in its mortuary style: one *machay* (rockshelter) in Unit 1, two cist tombs in Unit 2, and individuals buried outside and under the household floor in Unit 5. All units radiocarbon date to the late LIP with Chanka, Chanka-Inca, and Local Inca ceramics present. With the additional application of osteological, ancient DNA, and strontium and oxygen isotope analyses, the complexity of the late LIP Chanka only increases. We will discuss who the late LIP people were, if they were related, where they came from, and the style of their final resting place.

Blackwood, Emily (University of Maine)

[231]

Should I Post This? A Discussion on Digital Archaeology and Ethics

Creating 3D models of cultural materials raises ethical concerns for how they are captured, stored, displayed, and utilized. Mainly, who is and who has the right to make these decisions? Professional societies and associations have established principles and codes of ethics related to best practices, but language pertaining to 3D models or digitally rendered objects is often vague or absent. These gaps leave the ethical and equitable decisions surrounding these “digital artifacts” up to individuals or institutions to determine. Making ethical decisions that do not center Indigenous or descendant communities when working with their collections is a disservice to those communities and the discipline by continuing to prioritize physical objects over human agency. With increasing access to and affordability of technology, questions pertaining to digital colonialism, data management, accessibility, language, and public engagement need to be addressed before normalizing the use of digital methodologies within the discipline. This paper aims to shine light on and discuss the ethics involved with the creation of digital artifacts.

Blair, Carl [286] see Muraski, Jill

Blair, Elliot (University of Alabama), Dennis Blanton (James Madison University) and Laure Dussubieux (Field Museum of Natural History)

[50]

The Glass Beads of San Vito de Valdobbadiene: Compositional Analysis of Glass Beads from a Sixteenth-Century CE Italian Factory

Despite being the center of European glass bead production during the sixteenth through eighteenth centuries CE, very few elemental analyses have ever been conducted on glass beads recovered from known production sites in Murano/Venice. Here we present LA-ICP-MS data on sixteenth-century Nueva Cadiz and seven-layer chevron beads recovered from the site of San Vito de Valdobbiadene, a bead finishing location where glass canes produced in Murano were finished by faceting, using the waterpower of the nearby Piave River. These data provide a new, comparative baseline for the composition of Venetian glass beads produced during the mid-sixteenth century.

Blair, Elliot [175] see Semon, Anna

**Blake, Asher (Lyon College), Zoe Anderson (Lyon College), Madison James (Lyon College),
Mariah Smith (Lyon College) and Catalina Terlea (Lyon College)**
[257]

Undergraduate Reflections on Archaeological Ceramics through Experimental Archaeology

Undergraduate ceramic archaeological instruction is built around the common, and often taken for granted, categories of raw materials, functional forms, and decorative characteristics. As students, we primarily study these categories to classify materials in field and laboratory settings with little time or reflection spent on the construction of the categories themselves. In our Experimental Ceramic Archaeology class at Lyon College, we were challenged to create a different relationship to archaeological ceramics through experiential learning. In this paper, we summarize our experiences in learning how to create archaeological ceramic reproductions using traditional techniques and compare this with other courses in our academic careers in order to provide insights for the integration of experimental archaeology in anthropology and ceramics classes. We also present a series of observations on our relationship to the material world that was shaped by a more detailed engagement with producing objects.

Blake, Kieran [41] see Manfred, Carson

Blakeslee, Donald (Wichita State University) and Norman Conley (Wichita State University)
[283]

A Ritual Complex at Etzanoa

The National Park Service held its Remote Sensing Workshop at Etzanoa in May 2023, and Wichita State University followed with a field school in June. The results of both suggest that the area investigated was the site of a variety of ritual activities. Remote sensing there has included thermal imaging from a drone, magnetometry, resistivity, ground-penetrating radar, and magnetic susceptibility. These detected the structure of the underlying bedrock, variations in midden accumulation, a cluster of fire-related features, and a large number of storage pits. Excavation had previously revealed a series of bell-shaped storage pits on what was thought to be a natural knoll. That area, however, was buried under two layers of deep subsoil in a clearly purposeful fashion. All of the pits covered by these deposits were relatively empty of trash, and ceramics from them include a large proportion of Caddoan pottery. One proved to be a very large post pit with an insertion ramp. It and at least one of the bell-shaped pits contained broken grinding stones that may have marked a termination ritual.

Blakey, Michael (College of William and Mary)
[16]

Discussant

Blakey, Michael [16] see Bender, Katharine

Blakey, Michael [16] see Sevestre, David

Blancas, Jorge [218] see Carballo, David
 Blancas, Jorge [218] see Pereira, Gregory

Blanchard, Madeline
[54]

Becoming Avian: Amazonian Featherworks from the John P. O'Neill Collection

In 1998, ornithologist John P. O'Neill donated a vast ethnographic collection of objects he was gifted from fellow researcher Charles Fugler or purchased from local persons in Pucallpa, Peru, during his time studying birds in the Peruvian Amazon. According to O'Neill, the cultures responsible for these items' creations are the Cashinahua, Aguaruna, Achual, and Arawak. Eighteen of these items are beautifully crafted arrangements of feathered clothing and objects. These items include five headdresses (Items #22059, #22060, #22071, #22072, and #22074), five bouquets (Items #22189, #22190, #22191, and #22193), a hat (Item #22180), a necklace (Item #22179), three tassels (Items #22142, #22143, and #22164), a backpack (Item #22147), a scarf (Item #22148, and a hair tie (Item #22274). In order to properly study these items within their original context from the perspective of Amerindian cosmology, a materialist perspective is necessary. By using this perspective, one observes the items' ability to act and transform. This transformation, which I refer to as "becoming bird" or "becoming animal," entails reciprocal vibrancies resulting from those interactions among the items, their materials, and humans.

Blank, John
[257]

Experimental Archaeology as a Vehicle for Interdisciplinary High School Pedagogy

Archaeological content in high schools appears in the social studies curriculum as historical narrative rather than as part of the process of active information production. Surveys of students indicated that they do not see value in archaeological content beyond the classroom and that they perceive their role in a social studies class to be reiteration of known information. They reported very little interest in archaeology in higher education. Cooperating with teachers in other subjects enabled me to reorient class content around archaeology labs designed to teach students to interpret data, generate information, and synthesize it with their peers' findings. Subsequent surveys tracking changes in student perception of archaeology showed increased interest in elective archaeology courses. Responses indicated that their understanding of archaeology expanded to include science content. Building content around knowledge production also personalized student learning outcomes and facilitated development of evaluative skills. The teamwork component of this skill instruction models upper level academic environments and exhibits the interdisciplinary strength of archaeology. Building content around knowledge production, presentation, and discourse also personalized student learning outcomes which improved engagement and facilitated development of more advanced evaluative skills than could otherwise be accessed.

Blanton, Dennis (James Madison University)
[333]

Magic When It Matters the Most: Intensification of Tobacco Ritual during the Late Mississippian Period of the American Southeast

Religious traditions follow historical trajectories. Within the archaeological record, processes of cosmological reorientation may be signaled by patterned change in attendant ritual paraphernalia. This kind of evolutionary process may be tracked in the American Southeast among certain late prehistoric, Mississippian societies, specifically in relation to tobacco-oriented ritual. The case will be made for a trend of increasingly sectarian practice bolstered by a profusion of formalized, magico-religious invocations. This shift attends fundamental change in sociopolitical structure. The process of cosmological reformulation is empirically derived from examination of the numbers, attributes, and contexts of smoking pipe artifacts.

Blanton, Dennis [50] see Blair, Elliot

Blecha, Erika (University of Kansas), Rolfe Mandel (University of Kansas), Emily Reed (University of Texas, Austin) and Arlene Rosen (University of Texas, Austin)
[20]

The Relationship between Human Subsistence Strategies and Late-Quaternary Paleoenvironmental Changes in the Northern Chihuahuan Desert of Southwest Texas

Previous studies of the northern Chihuahuan Desert and Trans-Pecos region of west Texas primarily used plant macrofossils from *Neotoma* sp. middens to reconstruct Holocene and late Pleistocene paleoenvironments, offering researchers a general understanding of bioclimatic change for the period of record. Given the paucity of recorded PaleoIndigenous archaeological sites in the region, some researchers considered the available paleoenvironmental data and suggested that the region was unfit for humans during the terminal Pleistocene and early Holocene because of increased aridity during that period. However, recent archaeological and geoarchaeological research at two stratified sites—the San Esteban rockshelter and GLD open-air site—has revealed evidence of human habitation during the Pleistocene-Holocene transition, challenging the idea that the region was unoccupied by humans at that time. Moreover, archaeological and paleoenvironmental data gleaned from the sites provide an opportunity to learn more about humans and the environment during that transitional period. In this paper, we present the results of our ongoing research at the San Esteban and GLD sites and use faunal and phytolith analyses to refine our understanding of the relationship between human subsistence strategies and paleoenvironmental changes primarily during the Pleistocene-Holocene transition, but also after that period in the northern Chihuahuan Desert.

Bleskacek, Ruby [84] see Evans, Skyler

Bleuze, Michele

[221]

Chair

Bleuze, Michele and James Brady

[221]

An Important Cave Skeletal Assemblage Sees the Light of Day: A Reanalysis of Dos Pilas

The Petexbatun Regional Cave Survey, operating as a subproject of the Petexbatun Regional Archaeological Project from 1990–1993, was the largest Maya cave project ever conducted. Centered at the important site of Dos Pilas in the Department of Petén, Guatemala, the cave survey recovered a large and important human skeletal assemblage from six caves. The organization of the larger project featured many specialists in charge of analyzing particular aspects of the data, so the material was not controlled by the archaeologist who recovered it. As a result, the cave skeletal assemblage was never adequately analyzed. Fortunately, the greater part of the skeletal assemblage is now housed at California State University, Los Angeles, and is undergoing reanalysis. Each cave assemblage is being analyzed separately, reflecting the great variability in archaeological context and geomorphology. Preliminary reports on two of the caves will be presented in this session. While time does not permit the in-depth presentation of data here, we have already noted a good deal of information about the assemblage including skeletal pathology and the presence of juveniles across age categories. It is our goal that over the next few years, the entire assemblage will be analyzed and published.

Bleuze, Michele [221] see Mayoral, Roxanne

Bleuze, Michele [285] see Saldana, Melanie

Blewitt, Rosemarie

[293]

The State of State Archaeological Site Files

The North Carolina Office of State Archaeology (NCOSA) has spent several years digitizing its archive of reports and site records to improve access for cultural resource managers and researchers. As we work

toward making those files available for professional archaeologists to search remotely, we have compiled data on how other states make their site files available. There appears to be a spectrum of accessibility, from those that have nothing digitized to states that have all records digitized and available remotely for free to Secretary of the Interior-qualified archaeologists. Most states fall somewhere between those options, with many (like the NCOSA) in the process of moving from one end of the spectrum to the other, depending on available staff and financial resources. This paper will present the data compiled on the state of state archaeological site files, along with illustrating some of the challenges faced by data managers in their efforts to increase the accessibility of archaeological information.

Bloch, Lindsay, Matthew Reilly (City College of New York) and Craig Stevens (Northwestern University)

[327]

The Material Culture of Back-to-Africa: Object Reinvention in the Development of Africa's First Republic

Nineteenth-century Black American and Caribbean settlers of the Back-to-Africa movement to Liberia brought with them a wide variety of objects for building new lives and landscapes for their emancipatory and civilizing mission in West Africa. The migrants arrived to lands already inhabited by people long accustomed to European trading and possessing their own Indigenous material traditions. Recent excavations in Liberia by the Back-to-Africa Heritage and Archaeology Project have begun to untangle the complex assemblages of material culture on settlement era sites. These include Providence Island, the location of the temporary settlement of 1822 in Monrovia, to the town of Crozierville, settled by Barbadians in 1865. Here, we discuss artifacts with second lives: objects employed in new contexts, used and reused in strategic ways. From British refined earthenwares with extensive wear and modification, to locally made clay pots, migrants and Indigenous Liberians adapted their domestic toolkits as new lifestyles and identities were forged in Africa's first republic.

Bloch, Lindsay [135] see Kracht, Emily

Bloch, Lindsay [279] see Nelson, Erin

Blomster, Jeffrey (George Washington University)

[81]

Discussant

Blomster, Jeffrey (George Washington University)

[210]

Double Headed: Becoming/Transforming in Early Formative Oaxaca

Figurines, as small, portable anthropomorphic and zoomorphic ceramic images, provide insights into a range of representational and symbolic concepts of the ancient Mesoamericans who created and interacted with them. Figurines have been interpreted as actively deployed in household rituals and social negotiations, as well as displays beyond those of the house. As the human body both tracks and is a medium of social processes and political change, changes in embodiment and aesthetics are recursively related to larger sociopolitical transformations during the Early Formative. At the highland site of Etlatongo, in the Mixteca Alta of Oaxaca, Mexico, recent excavations have explored later Early Formative (1400–1000 cal BCE) domestic and public space, recovering a large assemblage of figurines from these diverse contexts. While the corpus resembles some of the figural imagery from the contemporaneous Valley of Oaxaca, there are also substantial differences, especially in terms of rare “special type” figurines such as the physically impossible: two-headed figurines. I examine the range of these figurines' forms at Etlatongo, also exploring the contexts in which they were found. I interrogate both what they may represent as images of becoming/transforming, and the work they do in terms of the objects' animistic and dialogic nature.

Blomster, Jeffrey [128] see Salazar Chávez, Victor Emmanuel

Blong, John (Washington State University), Justin Holcomb (Kansas Geological Survey), Jordan Thompson (Washington State University) and Sonya Sobel (Washington State University)
[281]

The Cascade Phase at the Kelly Forks Work Center Site, Idaho: Exploring Regional Variability Across the Intermountain West

The Cascade Phase archaeological culture has been recognized across a broad region of the Intermountain West including the Northern Rocky Mountains, Columbia Plateau, and Great Basin. Cascade Phase sites typically date to the early to middle Holocene period and are identified by a suite of stone tool types including foliate Cascade projectile points and a variety of cobble tools thought to represent intensive food processing. While there are patterns in the archaeological record across the diverse range of ecological landscapes with Cascade Phase assemblages, there are outstanding questions about temporal and regional variability in settlement organization during the Cascade Phase. Exploring this variability can provide information on the process of settling into local ecological landscapes during the Holocene, and relationships with traditional land use practices of descendant communities living in these regions today. This poster reports on excavation of a Cascade Phase occupation at the Kelly Forks Work Center Site on the North Fork of the Clearwater River, Idaho. The Kelly Forks site is positioned in the Bitterroot Mountains in the traditional territory of the Nimíipuu (Nez Perce) Tribe, providing insight into Cascade Phase settlement and land use in this region and connections to traditional Nimíipuu subsistence practices.

Blong, John [133] see Kingrey, Haden

Blong, John [202] see Sobel, Sonya

Blong, John [265] see Thompson, Jordan

Blue Sky, Kai-t [124] see Preucel, Robert

Blumenfeld, Dean (Arizona State University), Eunice Villasenor Iribé (Arizona State University) and Christopher Morehart (Arizona State University)
[174]

Labor, Land Use, and Settlement at Hacienda del Rincón de Guadalupe, Apaxco, Mexico

Many have argued that the hacienda of colonial Mexico represents the emergence of commercial enterprise through privately owned landed estates. However, these estates were not strictly economic units, but comprised a diverse social and political institution engaged in a complex interplay with the broader cultural landscape, transforming local environments and drastically reshaping communities and relationships. Internally, haciendas featured their own hierarchical structures organized around class and racial boundaries often with a dominant landowner (hacendado) at the top and various workers comprising the rest, many of whom were fettered to the hacienda via coercive systems of debt. This poster examines these processes at Hacienda del Rincón de Guadalupe, a middle to late colonial mining hacienda located in the contemporary municipality of Apaxco, Mexico. Pulling on both the archival and archaeological record, we present data from an ongoing investigation, examining the interactions between land, labor, and community life at the colonial estate. We consider how the hacienda both shaped and was shaped by its constituent parts as well as responded to the broader social, political, and economic landscape.

Blumenfeld, Dean [281] see Villasenor Iribé, Eunice

Boal, Zachary (University of Central Florida), Emily Zavodny (University of Central Florida), Carla Hadden (University of Georgia Center for Applied Isotope Studies) and Sarah Barber (University of Central Florida)
[200]

Reconstructing Seasonality at the Burns Site (8BR85), Cape Canaveral, Florida, using $\delta^{18}\text{O}$ Stable Isotope and Zooarchaeological Analyses

Understanding patterns of localized environmental change in the past can provide valuable insight into modern environmental patterns, as well as comparative options for modern day environmental planning. This research analyzes *Donax variabilis* associated with the Burns Mound Site (900–1600 CE), located on Cape Canaveral Space Force Station along the Atlantic Coast of Central Florida. Samples were taken along growth lines of 12 *D. variabilis* shells from multiple levels of the site. Results show high $\delta^{18}\text{O}$ values, particularly in the terminal edge of shell growth, correlated with time of harvest. Increasing ratios ^{18}O to ^{16}O indicate colder, dryer conditions, which today are found during the months of October through March, in particular the winter months of January through March. This correlates with a site occupation of at least the fall and winter. Additionally, $\delta^{18}\text{O}$ values suggest surface water was on average cooler during site occupation than it is today. Further zooarchaeological analysis will contextualize the isotopic analysis and seasonality observations. Understanding how local environmental conditions differ between site occupation and present can help to inform conservation ideas and better explain cultural practices such as resource use and site habitation.

Bobbitt, Hunter [72] see Bishop, Sarah

Boileau, Arianne (Mount Royal University)

[234]

Discussant

Boileau, Arianne (Mount Royal University), Carolyn Freiwald (University of Mississippi), Kitty Emery (Florida Museum of Natural History) and John Krigbaum (University of Florida)

[260]

The Columbian Exchange in the Maya/Spanish Borderlands: A Zooarchaeological and Isotopic Tale of Resistance and Repurposing

The introduction of Eurasian domesticates in the Americas significantly changed the Maya domestic economy during the early colonial period (AD 1535–1700). However, this change was heterogenous in scale across the Maya world. While areas under Spanish control quickly adopted chickens and pigs, borderland communities were not so inclined. In this study, we present zooarchaeological, isotopic, and archival data from the Maya lowlands to showcase how Indigenous communities rejected or appropriated European domesticates on their terms. Our zooarchaeological data suggest that, after contact, borderland Maya communities continued to rely on local fauna and did not make pigs, chickens, and cows pillars of their domestic economy. Of the few Eurasian domesticates found at these sites, the isotope data reveal they were raised locally or regionally. In some contexts, the elite repurposed Eurasian animals for status display and ritual, continuing to imbue meaning specific to the Maya culture to animal resources. We compare our results to zooarchaeological studies in other peripheral regions, such as the American Southwest. Overall, this study provides critical insight into processes of resilience and resistance concerning animal resource exploitation in Indigenous spheres under Spanish colonialism.

Boileau, Marie-Claude [166] see Ortner, Vaughn

Boivin, Nicole [217] see Crowther, Alison

Bojakowski, Piotr [47] see Palomino Berrocal, Raul

Bolender, Douglas (University of Massachusetts, Boston) and Kathryn Catlin (Jacksonville State University)**[48]***"The Cottage," a Small Viking Age Dwelling in North Iceland*

This poster serves as an introduction and overview to a poster session on the archaeology of Kotið ("The Cottage"), a small dwelling established during the initial Viking Age settlement of Iceland in the late ninth century. Kotið represents a previously unknown and uninvestigated site type in the early Viking Age settlement of Iceland: a small dwelling that was located on marginal land despite the widespread availability of fertile farmland in the immediate region. The mix of agrarian and marine foraging resources point to a blend of ecological strategies and participation in supra-household production activities. The combined size, location, and integration of the household at Kotið raise the question of inequality and social control among larger and smaller households in the early settlement landscape of Iceland. Although domestic habitation at Kotið ceased in the mid-tenth century, the site had multiple phases of use and reuse through the medieval period, which points to the continued but evolving importance of marginal sites in the long-term sustainability of farming.

Bolender, Douglas (University of Massachusetts, Boston)**[48]***Chair*

Bolender, Douglas [91] see Catlin, Kathryn

Bolender, Douglas [48] see Kiker, Summer

Bolender, Douglas [48] see Speller, Jeffrey

Bolender, Douglas [48] see Vaughn, Evie

Boles, Steve, William Iseminger (Cahokia Mounds Assistant Site Manager [Retired]) and Lori Belknap (Cahokia Mounds Site Superintendent)**[154]***The 700-Year-Old Guth Dugout: From Arkansas to Cahokia*

The Guth dugout is named for the finder Matt Guth, who found the dugout on a sandbar in a meander portion of the St. Francois River in 2008. The dugout was exposed after floodwaters receded and due to the find location, Guth was determined to be the rightful owner. The dugout was over 6 m long and in remarkable shape given its age. In 2009, the ownership of the dugout was transferred to a group of concerned citizens and board members of the Illinois State Archaeological Society who in turn donated the craft to Cahokia Mounds. In this paper we provide highlights concerning the discovery, recovery, acquisition, transportation, preservation, and installation of the dugout into an exhibit in the museum. We also discuss evidence of manufacturing techniques and how the overall design affected the crafts maneuverability and speed on the water.

Boles, Steve [154] see Kinsella, Larry

Bolin, Annalisa (Aarhus University)**[258]***Heritage Pragmatics: Problems and Opportunities in Pursuing Decolonization*

"Decolonization is not a metaphor," Tuck and Yang remind us (2012). What does this call to action mean for heritage studies? This paper explores attempts at decolonizing cultural heritage management and research. First, tracing the ways coloniality has continued to influence management practices in Rwanda, the paper argues that decolonization in this context requires a practical approach to management change. Using this case study as a jumping-off point, this paper further argues for attention to the practical aspects of decolonizing heritage and heritage research: issues of management, as in the case study, but also research practices and funding. For example, the case study of research in Rwanda also raises the issue of navigating a thorny political context that complicates decolonial goals. In Rwanda and beyond, the paper also explores

how the expectations of funding bodies can be profoundly mismatched both with the practical realities of decolonial research and with what decolonization means to people on the ground rather than to scholars. These pragmatic considerations affect outcomes and impacts in ways too easily left out of academic approaches to heritage decolonization.

Bollwerk, Elizabeth (Thomas Jefferson Foundation, Monticello), Jillian Galle (Thomas Jefferson Foundation, Monticello) and Fraser Neiman (Thomas Jefferson Foundation, Monticello)

[89]

Reassembling an Assemblage to Examine the Origins of Race-Based Enslavement at Flowerdew Hundred Plantation
Flowerdew Hundred, a 1,000-acre plantation tract located on the south side of the James River in Virginia, was the focus of decades of excavations by the College of William and Mary and University of California, Berkeley. Three Flowerdew sites are among the earliest seventeenth-century settlements occupied by enslaved Africans, indentured laborers, and landowning elites in North America. By the time excavations had ceased in 2007, artifacts and field records were divided among multiple institutions. Since 2018, the Digital Archaeological Archive of Comparative Slavery (www.DAACS.org) has worked to reunite, catalogue, and digitize field records and artifacts from these sites. This case study comprehensively examines artifact distributions from all three sites to analyze household organization in the early seventeenth-century Chesapeake. We explore how resident ethnicity, social status, and daily activities shaped living arrangements. Linking these data to early eighteenth-century sites in DAACS demonstrates that understanding the longer trajectory of occupation and spatial arrangements provides important insights into the multicultural dynamics behind the emergence and establishment of race-based enslavement in Virginia. The results also demonstrate that before archaeologists can reach meaningful conclusions about human behavior from an archaeological assemblage, they must know how the assemblage was excavated and curated.

Bolster, Alyssa (Brown University)

[201]

Maize and Meat over Millennia: Meta-analysis of Stable Carbon and Nitrogen Isotope Ratios from the Andean Pre-ceramic to the Colonial Period (7000 BCE–1600 CE)

Within the last 40 years, stable isotope analysis has revolutionized bioarchaeology, particularly in the study of human diets in the past. Thousands of studies have analyzed human and animal bone collagen and apatite, tooth enamel, dentin, and hair, but results have rarely been aggregated and studied at large scale. For this investigation, I will compile data reported in published human dietary studies in the Andes region of South America. Through a systematic review and meta-analysis of stable carbon and nitrogen isotope data in published literature, I will assess community diet in the Andes through both space and time (from 7000 BCE to CE 1600). These millennia subsume diverse local, regional, and imperial developments in cultural complexity, from the South American Pre-ceramic to the Inka and Spanish imperial expansions. I will examine specifically how diets have varied or remained stable throughout multiple phases of cultural development, particularly focusing on the ways in which expansive cultures and states impacted quotidian consumption on regional and local scales.

Bond Reis, Lucas (University of Arizona), Thiago Pereira (Universidade Federal de Santa Catarina), Walderes Cocta Priprá (Universidade de São Paulo), Fabiana Merencio (Universidade Federal de Santa Catarina) and Gabriela Oppitz (Universidade Federal de Santa Catarina)

[178]

Unraveling Indigenous Histories in the Upper Itajai Valley (Santa Catarina State, Brazil): Insights from Archaeological Research at the Tobias Wagner Site

The Upper Itajai Valley, nestled within Santa Catarina, Brazil, has stood as the enduring homeland of the Laklãnõ-Xokleng people for centuries—a testament to their remarkable resilience despite persistent struggles for land and social rights. Against this backdrop, we present new archaeological findings from the

Tobias Wagner site, which comprises 18 pithouses and their immediate surroundings. Our presentation builds on data collected during the fall fieldwork season of 2023, examining three distinct pithouses and three external areas. Each of these areas unravels unique insights into the lives of past inhabitants. Through a comprehensive analysis of chronological, technological, and archaeobotanical data, we reveal the construction processes, patterns of use, and nuanced continuities and changes that span more than a millennium at the Tobias Wagner Site. This research represents a crucial stride toward constructing a comprehensive, long-term history of Indigenous presence in the region, transcending the European invasion of the Americas. These Indigenous Histories are intricately woven with material remains, oral traditions, and collective memory. Consequently, our investigation of the Tobias Wagner site deepens our understanding of pithouses and explores how the Laklãñō-Xokleng ontology may inform the interpretation of archaeological records, making a valuable contribution to the broader field of Southern Je Archaeology.

Bond Reis, Lucas [136] see Bridgeman, Lauren

Bonde, Sheila (Brown University) and Clark Maines (Wesleyan University)

[91]

Between Research and Archéologie préventive: The State of/in the Field of Medieval Monastic Archaeology

Our paper will survey in critical fashion the last 20 years of medieval monastic archaeology in France. During that time, the new research directions of the late 1990s have confronted a changed landscape for archaeological work. The creation of INRAP has meant that fewer university-sponsored research programs have been proposed, approved and funded. Research questions have instead been increasingly tempered by the necessities of rescue archaeology. In this context, sites approved for excavation are often the result of new industrial construction, urban expansion or rehabilitation of older historic structures to new purposes. We will examine the data for patterns of archaeological priorities as these impinge on monastic sites, assessing where monastic sites have been explored, which monastic orders have been privileged, where female houses have been investigated, and where larger comparative questions of environment, technology and regionalism have been sought.

Bongers, Jacob [37] see Young, Michelle

Bonthorne, Emma (University of Oxford)

[211]

Approaches to Scale in Highly Commingled Contexts: A Case Study from Roncesvalles

Excavations at the ossuary of El Silo de Carlomagno, located in Roncesvalles (Navarre, Spain), have generated more than 680,000 human bones dating from the twelfth to the nineteenth centuries CE. The subject of ongoing archaeological research, the site represents one of the largest commingled assemblages ever studied, with a targeted approach to the inventory and collection of osteological data that has facilitated the interpretation of a range of mortuary practices employed throughout 800 years of continual usage as an ossuary, carnarium, and local cemetery. This presentation discusses some of the logistical challenges associated with such large-scale levels of commingling and the strategies employed in a highly fragmented context in which traditional MNI methodologies could not be readily applied. Conclusions from various aspects of the commingled analysis will be presented, specifically those from the demographic, taphonomy, and trauma analysis, all of which proved crucial in reconstructing mortuary patterns, identifying secondary deposits and specific episodes of conflict throughout the final phases of the ossuary's use. The dramatic scale, historical importance, and long-term usage of the ossuary make this a unique case study that highlights the enormous contribution to be made from the field of commingled remains.

Bonzani, Renee (University of Kentucky), Bruce Manzano (Western Kentucky University), Matthew Davidson (University of Kentucky) and Robert Tykot (University of South Florida)
[319]

Isotope Values Reveal “Canopy Effect” in Deer Territoriality and Maize Consumption for Dogs at Kentucky Archaeological Sites Dating to the Middle Woodland through Late Fort Ancient Time Periods

Our study aims to investigate the movement and territorial behaviors of white-tailed deer (*Odocoileus virginianus* Zimmermann) and dogs (*Canis familiaris* Linnaeus) over time, utilizing carbon, nitrogen, and oxygen isotope values derived from archaeological remains. An analysis of these isotope values extracted from tooth collagen and enamel was conducted for 20 deer teeth from 13 archaeological sites in Kentucky, spanning a period of approximately 1,500 years of human occupation. The “canopy effect” (grazing in deeply forested areas) in deer stable carbon isotope values was identified in the remains covering the Middle Woodland (200 BCE–CE 500) to Late Fort Ancient (CE 1400–1680). Additionally, tooth samples from nine dogs and one wolf (*Canis lupus* Linnaeus) were analyzed which revealed significant maize consumption in seven of the dog samples. These samples came from seven of the sites spanning the Early through Late Fort Ancient (CE 1400–1680) periods. Furthermore, we present carbon and nitrogen isotope values derived from deer bone collagen, analyzing nine samples from three of these sites dating to the Middle to Early Late Woodland (200 BCE–CE 800) periods. Hence, our study contributes to the growing database of isotope studies in the Eastern Woodlands.

Boomgarden, Shannon (University of Utah), Ian Farrell (University of Utah), Jenna Foster (University of Utah) and Duncan Metcalfe (University of Utah)
[294]

The Role of Experimental Archaeology at the Range Creek Field Station, Utah

Ten years ago, the archaeological field school at the Range Creek Field Station explicitly embarked on a new direction of research. Students continue to receive training in excavation and survey techniques but actualistic experiments were added to the curriculum. The experiments are designed to calculate the costs and benefits associated with exploiting various wild resources, constructing simple surface irrigation systems to farm maize, and building prehistoric storage structures. Combined with techniques for quantifying various aspects of the environment, such as the distribution and seasonality of plant resources that were likely economically important to the prehistoric residents of the canyon, these data provide students and researchers with unique perspectives on past people’s behavior. The Range Creek Field Station offers an ideal setting for reconstructing paleoenvironmental variability and the response of farmers to that changing environment. Taken together, these studies contribute to a comprehensive database addressing the cost/benefits of conducting activities with simple technologies for living in Range Creek prehistorically. The results from each year inform the character of experiments in the following years. We believe that this approach to building an interpretive framework for exploring the archaeology in Range Creek Canyon will be productive and rewarding to student participants.

Boomgarden, Shannon [294] see Farrell, Ian

Boomgarden, Shannon [294] see Foster, Jenna

Boomgarden, Shannon [41] see Greenland, Jamie

Boomhower, Daniel [90] see Sachse, Frauke

Booth, Don [204] see King, Jason

Borck, Lewis (University of Oklahoma)
[298]

Worlds Prefigured: Settler-Colonialism, Anarchism, Indigeneity, and the Dawn of Everything

For many, *The Dawn of Everything* emerges as a watershed moment in their perception of a new history, how

that history impacts the present, and the implications these cast on the future. For others, it is a brazenly biased distortion of history. For still more, the book creates waves of revelation while simultaneously leaving them awash in confusion as they grapple with the scope of the watershed, which tributaries were embraced, and which were left out to dry. It is after all impossible to cite everyone, but because of the scope of impact of *Dawn of Everything* these choices wield the power of a political manifesto. This paper, anchored in Indigenous and anarchist theory and praxis, will navigate what worlds *Dawn of Everything* might be prefiguring through those choices.

Boric, Dusan (Sapienza University of Rome), Nikola Borovinic (Center for Conservation and Archaeology Montenegro), Emanuela Cristiani (Sapienza University of Rome), Adisa Lepic (National Museum of Bosnia and Herzegovina) and Andrea Zupancich (Spanish National Research Council [CSIC])

[247]

Uncertainty Specialists: A Diversity of Late Upper Paleolithic Adaptations in the Dinaric Alps

This paper looks at the results of recent research at several late Upper Paleolithic sites in the area of the Dinaric Alps within the Eastern Adriatic catchment zone in present-day Montenegro and Herzegovina. For the first time in this region, a long-term persistence of the phenomenon of broad spectrum dietary strategy focused on the hunting of marmots has been recognized, with parallels in broadly contemporaneous sequences found in the Italian, French, and Swiss Alps. Apart from these likely seasonal hunting camps on marmots, it seems that longer-term aggregations, which might have represented “persistent places” on the landscape, can also be recognized as part of the regional settlement system. We have employed diverse methodologies in order to shed light on the examined sequences: radiocarbon dating, zooarchaeology by mass spectrometry (ZooMS), aDNA analyses, and use-wear analyses. Based on these different strands of data, we discuss the emerging picture of Late Pleistocene forager adaptations in this region, and to what extent these novel insights match the existing models of forager residential mobility during unpredictable environmental and climatic conditions. In doing this we evoke the memorable phrase “uncertainty specialists,” coined by Clive Gamble when discussing broadly contemporaneous foragers in the Epirus region of Greece.

Borie, César [119] see Power, Ximena

Bornheim, Savannah [72] see Lindler, Joseph

Borovinic, Nikola [247] see Boric, Dusan

Borrero, Luis [77] see Belardi, Juan

Borrero, Luis [306] see Franco, Nora

Borrero, Luis [200] see Gutiérrez, María

Borrero, Luis [281] see Luchsinger, Heidi

Borrero, Luis [9] see Martin, Fabiana

Borrero, Luis [9] see Morello Repetto, Flavia

Borsa, Adrian [263] see Comer, Jacob

Bossio, Laura (University of Michigan)

[130]

Chair

Bossio, Laura (University of Michigan)**[130]***Introduction: Wetlands, Cultural Heritage, and the Power of Archaeology*

Archaeologists are well poised to investigate the past, discover what cannot be seen today, and bring that knowledge to the present in meaningful and effective ways. One important field of archaeological study is that of human relationships with wetlands; many wetlands have already been destroyed worldwide, yet these ecosystems are both culturally and ecologically vital. The archaeological case study of North America's Lake Erie will demonstrate this disconnect: today, it is notorious for high pollution and toxic waters, yet Indigenous life, community, and connection were built and sustained through millennia in this region. This represents just one example of modern ecological and public health catastrophes largely caused by the eradication of endemic wetlands. Furthermore, wetland destruction is here discussed as a dangerous means of cultural erasure. As the papers in this session will reveal, responsible and focused archaeological investigations can bring to light these human-wetland relationships and interactions of the past and rebuild lost cultural knowledge. In doing so, archaeologists can illustrate the need for protection and conservation of existing wetlands and also support motions for wetland reconstruction.

Boudreaux, Sarah, Matthew Helmer (Kisatchie National Forest), John Mayer (Kisatchie National Forest) and Rachel Feit (Acacia Heritage Consulting)**[189]***Variability in Site Usage: A Comparison of Sites 16RA1758 and 16RA1811 in Kisatchie National Forest, Louisiana*

In 2020, unauthorized excavations and Hurricanes Laura and Delta extensively damaged sites 16RA1758 and 16RA1811 on the Calcasieu Ranger District of Kisatchie National Forest, Louisiana. To address the adverse impacts and gain a deeper understanding of precontact lifeways, Kisatchie National Forest initiated comprehensive excavations at both sites. Situated approximately 150 m apart and separated by Valentine Creek, these sites provide a unique opportunity for fine-scale analysis of precontact human activities. Preliminary analysis of both artifact assemblages show that the sites were occupied from the Late Archaic to the Late Woodland periods. Site 16RA1758 has features suggesting permanent settlement that spans from the Late Archaic until the Late Woodland period. Features include multiple post molds and intact fire features. Artifacts include re-worked tools, utilized flakes, biface blanks, and ceramic sherds. Site 16RA1811 has a large accumulation of lithic debitage, no discernable features, few formal tools, and few ceramics. Here, we present a comparison of sites 16RA1758 and 16RA1811 and describe how the observed patterns indicate site-specific provisioning, intersite variability, and diachronic changes. This presentation will discuss the results of investigations, preliminary analysis for both sites, and the implications for socioeconomic choices and strategies of the precontact people of central Louisiana.

Boudreaux, Edmond, III [279] see Krus, Anthony

Boulanger, Matthew (Southern Methodist University) and Brandi MacDonald (University of Missouri)**[24]***Geochemical Analyses of Poverty Point Objects: Implications for Production and Exchange*

We present results of a geochemical study on baked-clay balls (Poverty Point Objects; PPOs) obtained from the Poverty Point archaeological site. We compare our data with PPOs obtained at other sites to evaluate the proposition that PPOs were traded or exchanged among Poverty Point-related cultures in the Southeast. We find no evidence to support this proposition. We explore statistically significant chemical differences within PPOs obtained from different areas at Poverty Point itself, and outline hypotheses concerning modes of production of these artifacts by the site's residents. Finally, we compare and contrast various analytical methodologies to provide brief comment on their suitability for further studies of PPOs.

Boulanger, Matthew [84] see Jorgeson, Ian

Boulanger, Matthew [253] see Yerka, Stephen

Bourgeon, Lauriane (Kansas Geological Survey, University of Kansas) and Rolfe Mandel (Kansas Geological Survey)

[319]

Bluefish Caves I, II, III: Taphonomic Analysis of the Mammal and Bird Bone Assemblages

Following its discovery and excavation in the 1970s–1980s, the Bluefish Caves site (northern Yukon Territory, Canada) yielded a small number of stone artifacts and thousands of vertebrate remains buried in late Pleistocene loess. Preliminary taphonomic observations suggested that modern humans visited the caves about 30,000 years ago, raising considerable debate within the scientific community. More recently, a rigorous and systematic taphonomic analysis of the mammal bone assemblages from Bluefish Caves I and II showed that humans hunted horse and caribou as early as 23,500 cal BP. Here we extend the taphonomic analysis to the mammal bones from Cave III and to the bird remains from all three caves. Butchery marks were identified on a Snow Goose scapula from Cave II, and potential human bone modifications were observed on ptarmigan remains. We observed no sign of human activity in Cave III and hypothesize that it may have been ignored by humans in favor of the other two caves that offered better shelters and views of the adjacent lake. Compared with other late Pleistocene–early Holocene karstic sites in Alaska, we suggest that caves and rockshelters were only visited by humans on a sporadic, seasonal basis for hunting.

Boutin, Alexis [199] see Mogauero, Megan

Boutte, Kerry

[131]

Urban Poverty in Historic New Orleans: Revisiting Magnolia / C. J. Peete

New Orleans experienced considerable social change between the mid-nineteenth and early twentieth centuries, with the economic participation of its residents varying widely according to race, gender, and immigrant status. In the two decades following Hurricane Katrina, federal aid disaster response and rebuilding efforts offered rare opportunities to perform archaeological data recovery in some of the more historically impoverished neighborhoods of the city. Current interpretations of assemblages obtained from such projects have largely focused on the transition toward mainstream American consumerism. In revisiting archaeological materials from the former Magnolia / C. J. Peete housing development, this research aims to move beyond these established tropes in search of additional, less visible themes related to the economic and social activities of marginalized residents in urban environments. What were the experiences of those households occupying the fringes of full societal membership, and what, if any, artifactual commonalities exist across them? This paper will explore the potential for such similarities to be transferable and thus also viewed as indices of socioeconomic standing when encountered in other contexts and locales.

Bouzon, Helen

[131]

Foodways as Agentive Response to Disaster in Colonial New Orleans

Disasters have plagued the City of New Orleans since its founding in 1718. The citizens of New Orleans have adapted and rebuilt in the wake of each catastrophe. Two fires destroyed significant parts of the colony in the eighteenth century. Little attention has been paid to the short or long-term effects of these disasters, other than the recognition of a shift in the architectural signature of the colony. These well-known but poorly understood events in New Orleans's history likely had a greater effect on the cultural milieu of the burgeoning colony than previously surmised. One way to elucidate potential cultural shifts in response to disaster is to examine foodways around the time of the fires. Food procurement, production, and presentation can illustrate “agency,” habits, and behaviors employed in daily life that are reflective of the choices of individuals within a social framework. In order to explore the concept of agentive response to

disaster, this research examines responses to eighteenth-century fires through an analysis of faunal and ceramic material from multiple sites in the French Quarter. The results are examined temporally to infer changes over time.

Bouzouggar, Abdeljalil [55] see Worthey, Kayla

Bowden-Gray, Taylor [319] see Ogden, Brigid

Bowen, Gabriel [337] see Stantis, Chris

Bowers, Kellie (Alabama Department of Archives and History) and John Robert Elmore III (Alabama Department of Archives and History)
[73]

Perspectives, Policies, and Practices: How Thoughtful NAGPRA Implementation Can Change Everything

The Alabama Department of Archives and History has actively engaged in NAGPRA compliance work since 2018. In that time our NAGPRA and indigenous collections care policies have changed as our perspectives have grown and been shaped by consultation and relationship building with tribal partners and with participation in NAGPRA communities of practice. Our agency has undertaken a multifaceted reevaluation of its collections care and access policies with a scope that goes beyond Ancestral remains and objects subject to the law. This presentation details our institutional history of care for culturally sensitive materials, outlines our desired trajectory of long-term policy making and partnerships with tribal entities, and will also address how culturally respectful collections care has impacted our museum's interpretation of indigenous histories.

Bowers, Mozelle [70] see Cabanzo, Almi

Bowman, Robert [136] see Bridgeman, Lauren

Bowyer-Kazadi, Emily (University of Liverpool)
[22]

Deconstructing the Medieval Anchorhold

This paper will look at the religious phenomenon of anchoritism, popular in Western Europe during the medieval period and how we, in the twenty-first century can engage with it. The medieval anchorites (men) and anchoresses (women) lived in isolation in their anchorhold (cell) in order to live the life of a solitary recluse. The life within the anchorhold was lonely and tough, leading to possible negative impacts on the well-being of the anchorite or anchoress walled up inside us. This phenomenon may seem strange to us in the twenty-first century with our modern ideas and perceptions, however, there may be some comparisons between the isolation felt during the COVID-19 pandemic and well-being. and it is this which the presentation aims to investigate. This paper shall investigate how we can engage with medieval anchoritism through the lens of deconstructed landscape photography which focuses in on the details of a landscape or archaeological site rather than the wider landscape shot. This is a form of photography introduced by Scottish photographer by Niall Benvie and is a core part of my PhD research into engagement with archaeological landscapes.

Boyd, Carolyn (Texas State University), Phil Dering (Texas State University), Diana Radillo Rolón (Shumla Archaeological Research & Education Center) and Paul Schottmueller (Texas State University)

[156]

Origins and Tenacity of Myth: Part II—Ethnography

Hunter-gatherer artists of the Lower Pecos Canyonlands of southwest Texas produced Pecos River style (PRS) rock art as early as 5,500 years ago. In 2016, Boyd identified patterns in PRS murals similar to the mythologies of the ancient Nahua (Aztec) and the present-day Huichol (Wixárika). She advanced the hypothesis that PRS murals are visual narratives containing evidence of an Archaic core of beliefs that has persisted across time and cultural, linguistic, and geographic boundaries. To test this hypothesis, Boyd and Dering traveled to the Huichol community of San Andres Cohamiata, Jalisco, Mexico, and met with seven shaman-elders, whose belief system closely reflects ancient Mesoamerican cosmological concepts. Conducting and recording open-ended interviews, they shared illustrated mural panoramas with the elders to determine the answers to two questions: Are PRS pictographic elements and patterns recognizable to present-day Huichol shamans? Can they offer insights into the image-making process of PRS pictography or the visual narratives they portray? In *Origins and Tenacity of Myth: Part II*, we share preliminary results of our analysis of these interviews and reveal deeply embedded core symbols and concepts in PRS rock art that endure today in the ancestral knowledge of Indigenous Native America.

Boyd, Carolyn [244] see Anderson, Siobhan

Boyd, Carolyn [156] see Radillo Rolón, Diana

Boyd, Lars

[329]

A Proposition to Extend the Kings Crossing Phase in the Lower Mississippi Valley to 1200 CE

Ceramic data and radiocarbon dates from site 22Wr814, a newly recorded precontact lithic and ceramic artifact scatter along Mint Spring Bayou within Vicksburg National Military Park, show that the Kings Crossing phase (1000–1100 CE) extended to the end of the twelfth century CE in the loess uplands of the Lower Mississippi Valley (LMV). An analysis of the ceramic artifacts determined the ceramics are dominated by the Vicksburg set, the diagnostic set for the Kings Crossing phase. Shovel testing across the site identified a buried midden deposit with ceramics, lithics, faunal remains, fish scales, hickory nut shells, acorn shells, corn kernels, squash rinds, and floral remains. AMS dates on a hickory nutshell fragment and a corn kernel fragment provided a pooled mean of 905 ± 16 rcy BP, yielding a 2-sigma calibration range of 1050–1210 CE. These data along with other investigations in the LMV provide the context for proposing an extension of the Kings Crossing phase from 1100 CE to 1200 CE. By determining the actual termination of the Kings Crossing phase we can better understand culture change during the Coles Creek period in the LMV.

Boyd, Sabrina [281] see Smith, Heather

Boyd, Teegan (California State University, Los Angeles), Roxanne Mayoral (California State University, Los Angeles), James Brady (California State University, Los Angeles) and Michele Bleuze (California State University, Los Angeles)

[221]

Considerations of Depositional Context for the Commingled, Fragmentary Skeletal Assemblage from the Cave Environment at Cueva de Sangre, Guatemala

[WITHDRAWN]

Boyd, Teegan [221] see Mayoral, Roxanne

Bracamonte, Edgar [212] see Klaus, Haagen

Bracken, Justin (University of Utah Press)**[110]***The Hydraulic Landscape of Muralla de León*

Premodern landscape modification at the northeast corner of Lake Macanché, surrounding the site of Muralla de León, predominantly consists of small hilltop settlements and hydraulic channels. These channels interact with the lake itself, as well as the *juleques* (pond-sized water-filled sinkholes) that cluster in the vicinity. Two prominent channels were mapped and excavated during dissertation fieldwork in 2018: first, an artificial continuation to the east of the inlet off the lake that marks the southern boundary of Muralla de León. This first channel then turns 90° to the north and continues to the southern shore of the *juleque* to the east of the site, connecting the *juleque* to the lake. The second channel is a modified natural drainage that runs on a WSW bearing into the northeast of that same *juleque*, across from the northeast corner of the site. It consists of a narrow channel cut into bedrock and a series of constructed pools incorporated into the alignment. The function and chronology of construction and use of these hydraulic features are considered here in conjunction with data from the Muralla de León site interior.

Brady, Arden and Corey Ragsdale**[80]***Paleodemography of a Late Medieval Cemetery in Poland*

Paleodemography is a useful way of learning about the lives of people in the past, while gaining insight into their cultural and environmental conditions. The Late Middle Ages in Poland saw several cultural and climatic changes. Historical documents provide context for the elites during this period throughout the realm, but information regarding the lives of common people remains mostly a mystery. The increased demands of labor throughout the feudal system during the time no doubt would have made the lives of non-elites increasingly difficult. The cemetery of Gać in Poland (fourteenth to sixteenth century) provides an excellent opportunity to examine the lives of common, rural people using mortality data. This study examined mortality rates for 189 burials recovered during a mortuary archaeological field school. Our results show an unbiased male-to-female ratio among the individuals for which sex estimations were possible. The cemetery at Gać has a notably high child mortality rate of more than half of all burials recovered, and a particularly high mortality rate of older children. Results also show a relatively high mortality rate among adolescents and young adults. Our mortality analysis reflects the hardship of the common people during the Late Middle Ages in Poland.

Brady, James (Cal State LA)**[221]***Chair***Brady, James (Cal State LA) and Ann Scott (Terracon Consultants Inc.)****[221]***Correcting Interpretive Miscues with the Cueva de Sangre*

The Petexbatun Regional Cave Survey, working for three seasons from 1990 to 1993, was the largest cave project ever conducted in the Maya area. While investigating 22 caves and 11 km of passage, the survey collected a large assemblage of human skeletal material that had the potential for clarifying the nature of human remains in caves. That potential was never realized. The Cal State LA Subterranean Bioarchaeology Project has initiated a program to rectify the situation by reanalyzing and reinterpreting the Petexbatun cave assemblages. This presentation begins the process with a consideration of the Cueva de Sangre, the largest and most complex of the Dos Pilas caves. A major flaw of the previous analysis is its lumping all the caves together, negating a consideration of the varied contexts of the individual caves. For example, a considerable stretch of passage from the main entrance in the Cueva de Sangre consists of a muddy, seasonally inundated trench filled with human bone, artifacts, and ceramics. Bone in lower passages were recovered from a flowing river. No attempt was made to relate the depositional pattern to known cases in the archaeological literature with Alberto Ruz never being consulted.

Brady, James [221] see Bleuze, Michele
 Brady, James [221] see Mayoral, Roxanne
 Brady, James [285] see Saldana, Melanie
 Brady, James [221] see Verdugo, Cristina

Brady, Liam, Luke Taylor (Griffith University), Sally May (University of Adelaide) and Paul Tacon (Griffith University)

[156]

Meaningful Choices and Relational Networks: Analyzing Western Arnhem Land's Painted Hand Rock Art Style Using Chaîne Opératoire

A core feature of rock art studies concerns the characterization and analysis of motif styles to generate new insights into their function, meaning, and symbolism in the deep and recent past. Yet what is oftentimes overlooked is attention to the production sequence used to create motifs, and what this can reveal about the social and cultural behavior of artists. Where it is evident that a particular group of motifs contains a wide range of individual design conventions, questions about why and how these choices were made become points of enquiry that have the potential to develop new insights into their symbolic and relational character, and cultural significance. To address this challenge, we undertook an investigation of the rare and highly distinctive Painted Hand rock art style from western Arnhem Land (Northern Territory, Australia). Using a quantitative, systematic, style-based analysis, and an ethnographic exploration of a select group of distinctive design conventions, we show how the decisions made by artists to use specific design conventions were not random but instead were deeply implicated in, and shaped by, social processes acquired through learning or enculturation.

Brahmi, Néjat [95] see Ennahid, Said

Braje, Todd [304] see Rick, Torben

Brandeberry, Anna (University of Texas, Austin)

[252]

Pathways to Power for Classic Maya Sub-royal Elites

John Pohl's research is groundbreaking in its analysis of the supporting characters in Mesoamerican royal courts. Secondary elites (including the nobles, priests, merchants, and artisans of the court) vied for power using innovative tactics that worked outside the traditional systems of inherited authority. Pohl's work follows the creative political, social, and ritual strategies employed by those sub-royal elites to compete for power in Postclassic Mexico, but his findings are applicable to royal courts across Mesoamerica. This paper examines cases of Classic Maya secondary elites who sought power via similar unconventional pathways, and how their tactics appear in the archaeological record. At the site of El Zotz, in Guatemala, excavation data is combined with iconographic and material analyses to identify the political maneuvers of a possible merchant lineage group.

Brannan, Stefan (New South Associates Inc.)

[267]

Project Management in Archaeology: How to Finish on Budget and ahead of Schedule while Meeting Expectations

Project management is an extremely important but critically underutilized body of knowledge in our discipline. Many of the activities that archaeologists engage in fit the definition of a project, that is a temporary effort that creates value through a unique product, service, or result. Despite that, many of us were never introduced to effective project management methods and only learned how to do it through trial and error. The goal of this poster is to provide an overview of project management as an effective tool that

can be employed by the SAA membership, including students, private and public sector professionals, and academics. Specific insights include 1) commonly used management frameworks that facilitate the responsible completion of research; 2) the roles and constraints of scope, schedule, and budget as they relate to archaeological projects; 3) what are common mechanisms to measure project success; and 4) common project management pitfalls which can result in inadequate preparation for research projects, degrade research integrity, and delay or prevent the dissemination of research.

Braswell, Geoffrey (UC San Diego)

[164]

Chair

Braswell, Geoffrey (UC San Diego)

[164]

Maya Obsidian Production and Exchange in the Southern Belize Region

Permanent occupation of inland southern Belize began at the dawn of the Classic period and continued into the Terminal Classic. Excavations at Pusilha, Lubaantun, and Nim li Punit have recovered more than 5,000 obsidian artifacts that date to these periods. These have all been sourced using portable XRF and subject to metric and attribute analyses. Although the Southern Belize Region is small and the major sites are close to each other, their access to material, procurement strategies, production and consumption patterns differ, supporting the notion that these communities had distinct external relations, were the center of their own bounded economies, and were distinct small polities.

Braswell, Geoffrey [251] see Chase, Arlen

Brattinga, Joris [334] see Veselka, Barbara

Braun, Gregory [174] see Foran, Debra

Bravo Meza, Bradymir [243] see Heaney, Christopher

Bravo Meza, Bradymir [243] see Sanchez Garcia, Julio

Bray, Tamara (Wayne State University)

[208]

Discussant

Bray, Tamara (Wayne State University)

[242]

Discussant

Breda, Evelyn

[300]

Bone Collectors: Personhood and Appeal in Human Remains Sales on Facebook

The desire to own human skeletal remains has been prevalent for many years; in our modern technological age avenues for this market have exploded across the internet. This research focuses on Facebook groups dedicated to oddity sales and collecting. Purchasing human remains is illegal in Georgia, Louisiana, and Tennessee as well as prohibited by Facebook terms of service, but these sales persist. During 2021, 319 listings for human skeletal remains were recorded across six Facebook groups. Many elements are artistic in nature, something viewed as “Giving a second life” to the remains, as observed within these groups. To

understand the driving force behind this market requires cultural insight about the perception of human remains as well as the culture found within these groups. Kinship, friendship, and trust are all clearly expressed between buyers and sellers. Human skeletal remains often come from dubious origins, including that of grave robbing, exploitation, and co-opting of unclaimed remains. Despite this, the desire to own them is prevalent on Facebook. The view of personhood within these groups is clear: these skeletal remains are objects to be treated as such by individuals who purchase them.

Breen, Eleanor

[142]

Discussant

Breen, Eleanor [89] see Niculescu, Tatiana

Breiter, Sarah (Northwestern University)

[327]

Chair

Breiter, Sarah (Northwestern University)

[327]

Reused Timber and Woodland Management in Western Suffolk

This paper investigates the social context of timber reuse in late medieval and early modern timber-framed buildings. The data for this survey are centered around the town of Bury St. Edmunds, a market town in western Suffolk surrounded by rural farmsteads and villages. In the mid-sixteenth century there was a major shift in regional landownership due to the Dissolution of the Monasteries. The land, including woodlands went from being managed by the local abbey, a large institution, to multiple, smaller landlords. I examined 30 buildings from the rural and urban areas around Bury St. Edmunds, with construction phases dating from 1400 to 1700. Within these 30 buildings, there were 48 construction phases, and there was evidence of reused timber in 20 of them. However, the patterns of reuse observed in the survey do not necessarily relate to a lack of proximity to woodland. Historical documents indicate that timber was restricted by landlords throughout the period, both during and after the abbey's control of the land. Thus, this paper argues that the patterns of reuse observed in the survey indicate a long-standing building practice that developed in response to existing woodland management practices and subsequently intensified in later periods.

Brennan, Michael [213] see King, Eleanor

Brennan, Tamira (Illinois State Archaeological Survey), Teresa Palomares (Illinois State Archaeological Survey), Georgia Abrams (Illinois State Archaeological Survey) and Hannah Rucinski (Illinois State Archaeological Survey)

[305]

The Ethics and Outcomes of Using Archaeological Collections for Education

This paper discusses the ethical implications of using archaeological collections for education and outreach as well as the potential challenges that doing so poses to repositories and museums. We cover the benefits and burdens of accessioning donations, specifically discussing how to assess their potential value for teaching and research, and we compare the outcomes of using archaeological objects versus the rapidly growing body of alternatives, such as replicas, 3D-printed objects, and digital models. We conclude with how curators can make significant contributions toward education while upholding ethical standards. We use the Illinois State Archaeological Survey's work with its Illinois Department of Transportation collections as an example and highlight the relevance of this work in light of recent legislation that mandates Illinois public schools include past and present Native American culture and history in their curriculum beginning in the 2024–2025 academic year.

Brennan, Tamira [137] see Abrams, Georgia
 Brennan, Tamira [137] see Rucinski, Hannah

Breslawski, Ryan (AR Consultants Inc.)
[140]
Chair

Breslawski, Ryan (AR Consultants Inc.), Annette Romero (AR Consultants Inc.), Olivia LoGiurato (AR Consultants Inc.) and Kathryn Crater Gershtein (AR Consultants Inc.)
[140]

Ongoing Investigations into Late Woodland and Early Caddo Subsistence in the Bois d'Arc Creek Watershed, Northeast Texas

Bois d'Arc Creek is located at the western margin of the Caddo region, feeding into the Red River from northeastern Texas. In 2019–2021, AR Consultants Inc. excavated six sites in the Bois d'Arc Creek watershed, yielding archaeofaunas associated with Late Woodland and Early Caddo occupations. These sites tend to be located on terraces near the creek floodplain and situated within environments rich in plant and animal resources. Analysis of faunal remains from non-funerary features is complete for one site, and complementary datasets are currently being generated for two of the five remaining sites. The assemblages are dominated by deer and turtle, although they are characterized by an overall diverse suite of fauna. Further, generally good bone surface preservation has allowed for analyses of surface modifications including butchery marks, rodent gnawing, and carnivore activity. This talk presents the taxonomic composition, taphonomy, and animal butchery patterns observed in these assemblages, describes emerging trends within the project area, and compares these trends against what has been observed elsewhere in the Caddo world. Brewer, Jaxson [172] see Darbyshire, Samuel

Brewer, Jeffrey (University of Cincinnati), Nicholas Dunning (University of Cincinnati), Shane Montgomery (University of Calgary), Nicolaus Seefeld (University of Bonn) and Christopher Carr (University of Cincinnati)
[31]

Big, Bigger, Biggest: Investigating Aguadas 1–3 at Calakmul, Campeche, Mexico

Calakmul is known to be one of the largest ancient Maya urban centers in the Elevated Interior Region of the Maya Lowlands. Thus, it is not surprising that in this water-challenged environment, the population of Calakmul invested in some of the region's grandest reservoirs. While limited excavations were carried out in several of the site's reservoirs some three decades ago, the true scale and chronology of these features remained relatively hazy. Lidar imagery of Calakmul and excavations conducted in 2022 and 2023 have clarified knowledge of the city's water management system. We report here on excavations in three of the largest urban reservoirs known simply as Aguadas 1, 2, and 3. These massive tanks all had their origins in Preclassic times but were apparently modified in the Classic and continued to be used in the Postclassic.

Brewer, Jeffrey [31] see Anaya Hernández, Armando
 Brewer, Jeffrey [31] see Dunning, Nicholas

Brewer, Simon [107] see Wilson, Kurt

Bria, Rebecca (University of Texas, San Antonio) and M. Elizabeth Grávalos (Stanford University)
[81]

Cuisine and Craft at Ancient Hualcayán: Exploring Ceremonial Production during the Chavín to Recuay Transition (900 BCE–1000 CE)

In this paper, we explore the production techniques, provenances, and uses of the pottery and foods important for different kinds of ceremonies throughout the Chavín to Recuay transition at Hualcayán, an ancient community located in the Callejón de Huaylas valley of highland Ancash, Peru. Ritual celebrations were a salient feature of social and political life at Hualcayán, where people fortified community ties through feasting, drink, and cooperative building projects over several millennia. Here, we combine analyses of ceramic paste technologies, the possible provenance of geomaterials used to make pottery, and the evidence for food production and procurement practices that were essential to these ceremonies. We conducted laser ablation–inductively coupled plasma–mass spectrometry (LA-ICP-MS) and thin section petrography on a preliminary sample of ceramics and performed macrobotanical, microbotanical, and faunal analysis of food remains recovered across ritual contexts and time periods at Hualcayán. By analyzing these datasets together, we aim to highlight the many sequences of practice involved in or indexed during these ritual events while exploring the changing social and material relationships that underlaid Chavín, Huarás, and Recuay communities between 900 BCE and 1000 CE.

Bria, Rebecca (University of Texas, San Antonio)

[208]

Discussant

Bria, Rebecca [284] see Oliver, Kalei

Bria, Rebecca [185] see Sharp, Emily

Bricking, Adelle (Cardiff University), Oliver Davis (Cardiff University) and Richard Madgwick (Cardiff University)

[334]

Life and Death in Iron Age Wales: Results from Radiocarbon Dating, Histological, and Stable Isotope Analyses from Case Study Sites

The Iron Age in Wales is understudied compared to other regions in Britain largely due to the lack of osteological evidence. A study by Rowan Whimster in 1981 found only eight burial records in the entire country, leading to the assumption that Iron Age peoples in Wales conducted “archaeologically invisible” funerary rites, especially excarnation within hillforts. However, a recent reevaluation of Iron Age site excavations by Oliver Davis in 2017 has uncovered a larger burial corpus in Wales, offering an opportunity to assess funerary practices, mortality profiles, health, diets, and origins of the Iron Age population. This paper presents results from radiocarbon, histological, and multi-isotope analyses of two settlement sites with the largest assemblages of burial evidence: RAF St Athan in the Vale of Glamorgan and Dinorben in Conwy. Through this integrative study of isotopic and microtaphonomic analyses, the project aims to enhance our understanding of mortuary practices and provide new insights into the diets and origins of prehistoric populations in Wales, thus redressing long-held assumptions about life and death in the Iron Age.

Bridgeman, Lauren (University of Arizona), María Nieves Zedeño (University of Arizona), François Lanoë (University of Arizona; University of Alaska, Fairbanks), Lucas Bond Reis (University of Arizona) and Robert Bowman (NLUR)

[136]

St. Pius X Mission Boarding School: An Archaeological Investigation

The Pius X Mission School, founded in 1918 in Skagway, Alaska, lies at the center of the archaeological investigation discussed in this presentation. Researchers at the University of Arizona, Bureau of Applied Research in Anthropology aided in the assessment of cultural significance of the Pius X Mission Boarding School. Researchers collaborated directly with the Municipality of Skagway and the Skagway Tribal Council to conduct archaeological, ethnographical, and archival work to contribute to a more encompassing view of how St. Pius X Mission impacts the community of Skagway. This presentation will reflect on the importance of archaeological work, within the context of boarding schools, to highlight the lived experience of immersive

assimilation and systemic violence. Students at St. Pius X Mission, and within the boarding school system, experienced a genocidal philosophy toward Native Americans. Recognizing boarding schools as systems, such as St. Pius X, have caused intergenerational trauma among native communities will contribute to more thorough archaeological investigations. This project highlights a continued need for open collaboration between municipalities, universities, and Tribal councils to inform our understanding of the past and contribute to future management and development plans of these spaces.

Bridges, Andrea [72] see Barzilai, Rebecca

Bridges, Dusti (Cornell University)

[277]

“United with Them in Good Feeling and Friendship”? Material Insights into Seventeenth-Century Onöndowa'ga:' Hodinöhsö:ni' Incorporations

Onöndowa'ga:' (Seneca) Hodinöhsö:ni' (Six Nations Iroquois) communities in what we now call New York State incorporated a number of other Indigenous peoples, both individuals and large groups, throughout the seventeenth and eighteenth centuries. Other settler scholars have interpreted the status of these incorporatees as akin to enslavement—particularly for the Wendat (Huron) incorporated following their military defeat in 1649—yet little attention has been paid to the social, economic, and political dynamics of the communities following these incorporations, nor have many considered Hodinöhsö:ni' traditions and perspectives on this history. Employing legacy collections held in the Rochester Museum and Science Center, I utilize a relational activities-based lens to explore the experiences of incorporated peoples and their hosts. This paper forms one part of a three-generation study of Onöndowa'ga:' incorporations, focusing on the first generation of Wendat and other Iroquoian-speaking peoples incorporated in the mid-seventeenth century. Comparing material from two principal sites occupied directly following the Wendat defeat, Marsh and Dann, along with a contemporary satellite site purported to host the bulk of the incorporated group, Wheeler Station, I demonstrate the need for a more nuanced understanding of Hodinöhsö:ni' incorporations outside of the simplistic—and defeatist—interpretations of enslavement and erasure.

Briggs, Emily (University of Minnesota), Xinyuan Zheng (University of Minnesota), John Berini III (University of Minnesota) and Edward Fleming (Science Museum of Minnesota)

[337]

A Combined $^{87}\text{Sr}/^{86}\text{Sr}$ and $\delta^{18}\text{O}$ Isoscape of Minnesota for Estimating Geographic Origins: A Case Study

Strontium and oxygen isotopes preserved within plant and animal remains reflect the regional geology and environment where they originated. This approach relies on a regional map of baseline isotope values—or isoscape—to link values preserved in remains with a region of origin. Mechanistic models, which estimate baseline $^{87}\text{Sr}/^{86}\text{Sr}$ based on age and type of bedrock, can be used for geographic origin estimates if the primary driver of $^{87}\text{Sr}/^{86}\text{Sr}$ comes from weathered bedrock. In post glacial landscapes such as Minnesota, which are mostly covered by till, mechanistic models based on bedrock cannot be reliably used to estimate geographic origin. This project developed an $^{87}\text{Sr}/^{86}\text{Sr}$ isoscape of Minnesota through vegetation sampling and combined this data with preexisting $\delta^{18}\text{O}$ isoscapes. Variability in $\delta^{18}\text{O}$ is largely dependent on regional precipitation patterns, so the $\delta^{18}\text{O}$ preserved in organic materials can be used to constrain geographic origin estimates. The combined $^{87}\text{Sr}/^{86}\text{Sr}$ and $\delta^{18}\text{O}$ isoscape was evaluated on its ability to accurately estimate the geographic origin of archaeological faunal material of known provenance. This research demonstrates the necessity of developing regionalized isoscapes and outlines a protocol for doing so. It has produced a resource that has wide ranging applicability in archaeology and related fields.

Briggs, Rachel (University of North Carolina, Chapel Hill) and Heather Lapham (University of North Carolina, Chapel Hill)**[260]***Eating Colonialism: Consumption and Resistance in the Indigenous American South, Sixteenth through Early Nineteenth Centuries*

There is no one way that European domesticates were understood by Indigenous groups throughout North America. In the American Southeast, Spanish explorers and colonists introduced peaches, watermelons, and pigs during the sixteenth century, yet only peaches and watermelons were understood by most Native groups as food appropriate for Native bodies; pigs were rejected and considered unsuitable for Native bodies well into the eighteenth century. In this paper, we explore the symbolic qualities of pigs within southeastern Native cuisines from the sixteenth through early nineteenth century and propose that despite their culinary similarities to bear and bear oil within many Indigenous cuisines, the symbolic association between pigs, European bodies, and European colonial efforts led many Native groups to resist pork consumption as an act of sovereignty intended to keep Native bodies “Native.”

Briggs, Rachel [253] see Beck, Robin

Brite, Elizabeth [42] see Apuzzo, Cassandra

Brito Salvador, Mirko (Proyecto de Investigación Arqueológica—Región Pallasca) and George Lau (University of East Anglia, Norwich)**[81]***Prácticas textiles y complejidad social Recuay: Nuevas evidencias de Pashash (Ancash, Perú)*

Recientes investigaciones en Pashash revela nuevos datos para comprender la complejidad social de los grupos Recuay en la sierra norcentral, Perú (200-600 dC). Esta ponencia se enfoca en el material textil hallado junto a otros objetos en un contexto de ofrenda de elite. El análisis de hilos y restos textiles pone en evidencia la preocupación de los tejedores Recuay por la obtención de fibras locales y extranjeras, así como un especial énfasis en el proceso técnico para lograr refinados tejidos y cordones. Se indica una tendencia en la producción de bienes con tecnologías cada vez más sofisticadas de la mano del creciente prestigio de los liderazgos políticos locales. El escenario interpretativo sugiere que el renovado desarrollo de prácticas textiles y tecnologías afines se vincula con innovadoras dinámicas que contribuyeron en la formación y sostenimiento del tejido social y las relaciones políticas en Pashash.

Britt, Kelly (Brooklyn College)**[1]***Dismantling Inequities of Disaster: A Speculative Archaeology Approach*

When severe weather events strike, disaster ensues, leaving a catastrophic and at times an apocalyptic wake. This wake ripples through populations differently, generally preying on those already on the margins prior to the event and amplifying the structural inequities, whether they are economic, social, political, or physical. These events hit deeper and last longer. Most large-scale response and recovery efforts focus on getting “back to normal,” but “back to normal” for those at the margins generally means slipping further in this direction as existing inequalities are exacerbated by the effects of disaster. How can archaeology and heritage work inspire us to seek something beyond the normal that can build a better future for these marginalized communities? Building on my work from various sectors of the field, I turn to what I feel is archaeology’s greatest gift: storytelling. Using the speculative as informed by ethnography, heritage, and speculative fiction, how can we incorporate this mode of analysis and evidence-based conjecture to embody a present and imagine a future that dismantles these structural inequities?

Britt, Kelly (Brooklyn College)**[142]***Moderator*

Britt, Tad [177] see Whitehurst, Sadie

Britton, Emma, John Welch (Archaeology Southwest), Brandi MacDonald (University of Missouri, MURR), Fred Nials (Archaeology Southwest) and April Oga (University of Missouri, MURR)**[236]***Multimethod Forensic Sedimentology to Address Heritage Crime*

As memories of World War II waned and the sixties swang, anthropologists developed a healthy distrust of State interests in our field. Relegated to the kids' table, anthropologists disengaged from the State for many decades. Among the consequences of our broad professional disdain for officialdom is an inattention to cultural heritage crime. Here, we present initial results from a proof-of-concept study for forensic sedimentology in upland Arizona, a region of high heritage crime activity. Our forensics sedimentology team has re-invited archaeologists to the table, bringing robust analytic methods, courtroom-ready evidence, and the view that forensic archaeology involves more than dead bodies. We are complementing a context-specific focus on dirt (which is ubiquitous), with geomorphology, microscopy, petrography, and trace element analysis to assess and validate sediment provenience attributions. Petrography, for example, is providing information regarding specimen mineralogy, and may illuminate distinctive context attributes, such as snowmelt, and episodes, including flash floods. Multi-method sedimentology is an effective tool for linking objects or persons of interest to crime scenes. When these lines of evidence are synthesized and interpreted, a compelling case can be made for their efficacy in curbing and solving cultural heritage crimes.

Britton, Kate (University of Aberdeen)**[247]***North of the Wall: Archaeo-ecological Approaches to Scotland's Elusive Paleolithic Past*

For more than a century, Paleolithic Scotland was missing from the textbooks, presumed nonexistent. A low-density of archaeological finds was compounded by a research tradition that persistently excluded the possibility of human settlement at the extreme edge of northwest Europe prior to the Holocene, a situation at odds with decades of paleoenvironmental research. Recent discoveries of unequivocal Late Upper Paleolithic (LUP) sites have provided indisputable evidence for human activity in Late Pleistocene Scotland, yet research continues to be held back by both a lack of investigation and a lack of conventional finds. With specific reference to the Paleolithic archaeology of Scotland, this talk will explore the perceptual barriers that can inhibit research, as well as the challenges of understanding the human past where little conventional archaeological evidence belies an undoubted human presence. PAIaEoScot (People, Animals, Landscapes and Environments of Late Glacial Scotland) will be introduced, a new research initiative from the University of Aberdeen which centers on the use of archaeo-ecological and multispecies approaches to explore the low visibility archaeology of LUP Scotland. The first results will be presented, including new radiocarbon dates and isotopic analyses of paleontological materials, illuminating the chronological and ecological context of postglacial recolonization in Scotland.

Britton, Kate [247] see Barakat, Sarah

Britton, Kate [334] see Czére, Orsolya

Briz i Godino, Ivan [198] see Torras Freixa, Maria

Brock, Daniel (Tennessee Division of Archaeology)**[206]***An Archaeological Study of Pit Cellars in Tennessee*

This presentation discusses the regional and ethnic identity of pit cellars in Tennessee. Pit cellars are pits dug into the ground within or around historic buildings that were typically used for the storage of food or personal items. They come in multiple forms and were used by many different groups in North America. Archaeologists prize them for the valuable information they provide about the past and the people who used them. Previous archaeological excavations in Tennessee have revealed hundreds of these features at a variety of sites inhabited by African Americans, Euro-Americans, and Indigenous Americans. Using previously reported data, a survey of pit cellars was conducted in Tennessee's three grand divisions to study the various types of pits, people, and places they occurred over time. The synthesis of this information is used to understand if pit cellars were a regional phenomenon or a manifestation of ethnic identity.

Brock Morales, Amanda (University of Florida)**[172]***Palabras Andantes: Collaborative Story Mapping of Community Memories Using QField at Chupacoto in Huaylas, Peru*

In 1970 a 7.9 magnitude earthquake destroyed many towns in the Callejón de Huaylas and displaced many families. Following the earthquake, elevated monumental archaeological sites in the region, such as Chupacoto in Huaylas, were occupied by families who continue living there today. As a result of these occurrences, tensions between various stakeholders arise. However, while Chupacoto appears to be a remnant of the past, it is a vibrant and active part of the Huaylas landscape today. In 2022, I documented memories and interpretations of Chupacoto with local community members using the QField phone application. QField allowed me to walk around Chupacoto with participants to map stories and memories in place around the archaeological site. The mapping was coupled with sit-down interviews with participants and highlighted Chupacoto as a place in the making with value and vitality in the present. After documenting stories using QField, the Kawsay Pacha team conducted archaeological excavations at Chupacoto in 2023 to understand the relationship between architectural changes to the site and the broader landscape. Ultimately, this project intends to braid present-day local knowledge and memories of Chupacoto with archaeological and scientific findings about Chupacoto's role as a ceremonial center in an environmentally active landscape.

Brockwell, Sally (Australian National University) and Colin Pardoe (Australian National University)**[130]***Residential Patterning around Highly Variable Wetlands in Australia*

We compare residential patterning of hunter-gatherer/forager populations along wetlands on the coastal plains of the Top End of the Northern Territory of Australia and the Riverine Plain of the Murray Darling River Basin, New South Wales. Although climates are very different in these regions, people needed to adapt to the variability, as well as the specific ecologies of these evolving environments. Mapping of earth mounds associated with these wetlands provides an indicator of settlement patterns relating directly to local hydrology. This is also a distillation of roughly 4,000 years of individual and group decision-making about the best places to live. We provide examples of how this traditional knowledge can be used as an environmental proxy, or indicator of where we should concentrate our conservation efforts. Constraints on water availability, introduced animals and plants, tourism, water-level change, and sea-level rise are all in play. The archaeological record may or may not survive these impacts, but our eyes must be firmly set on trying to keep some animals and plants alive. If the environment survives, so does the archaeology have a better chance.

Brody, Rachel (Boston College)**[22]***Opening Up a Can of Worms: Putting Archaeological Evidence for Intestinal Parasites in Conversation with Early Medieval Medical Manuscripts*

In what ways did early medieval people of the Atlantic Archipelago encounter parasitic worms within and about their bodies, and how did these gutsy matters affect their daily lived experiences? To begin answering these questions, we should consider, alongside environmental archaeological data, textual sources in the form of early medieval medical manuscripts. Therefore, I will first present examples of *Trichuris trichiura* and *Ascaris lumbricoides* eggs preserved in human coprolites from excavated sites dating between 800 and 1000 CE. The sites I will discuss are Coppergate—the Anglo-Scandinavian urban deposits—in York, England, and Fishergate Street, an Hiberno-Norse urban conurbation located in Dublin, Ireland. Next, I will consider this evidence together with *Medicinale Anglicum* (Royal MS 12 D XVII) and the *Lacnunga* (BL, Harley 585)—two texts compiled in the ninth century—which show that medieval people were very much aware of their uninvited parasitic guests and were knowledgeable about plant-based cures to help dispel them. Intestinal parasites, especially in urban settings, were likely ubiquitous in the day-to-day lives of early medieval people. We can begin to unpack these nonhuman entanglements through text and archaeology to understand how people coped and understood their bodies and navigated their local ecologies to find herbal remedies.

Broodbank, Cyprian (University of Cambridge)

[18]

Continental Dynamics and the Shaping of Island Societies

Island archaeologists have tended to underplay the significance of continents and their social dynamics in influencing the temporal and spatial patterning witnessed among island societies at a regional and comparative level. When continents are considered, it is largely as staging posts for initial peopling, or as recipients of island trade, with much of the emphasis on generic continental factors encouraging early insular settlement, for example in the context of broader farming expansions. This paper argues that later continental dynamics involving the emergence of major polities, their networks, and associated technocomplexes played a far more crucial role in shaping the pattern of island lives in later prehistory than is currently appreciated, despite the uncontested importance of such factors over the last 500–600 years. It suggests, moreover, that specific contexts can be identified that help to explain quite precisely the historical timing of many major episodes of change in island life, including a fundamental reshaping of Cypriot society in the mid-third millennium BC, the earliest human activity on many of the circum-African island groups, and the chronology of sail-borne expansion into Island Southeast Asia, and across the North Atlantic.

Brooks, Allyson

[313]

Discussant

Brooks, Bria

[92]

Chair

Brooks, Bria

[92]

Interpreting Prospect Bluff

In the nineteenth century, a fort and independent settlement of enslavement escapees and their descendants emerged along the Apalachicola River. Prospect Bluff, which eventually became to be known as “Negro Fort,” was a place where Maroons resisted the institutions of slavery. Prospect Bluff hosted a vibrant community of Maroons. At its peak it was home to Native Americans as well as Black men, women, and children from varying cultures including Spanish, British, and French Caribbean. The fort, though heavily armed, was eventually destroyed by the US Navy because it was marked as a threat to the emerging presence of US imperialism. The construction of communities like the one at Prospect Bluff, are a materialized reality of the consciousness and extent to which African descendant people in the Americas physically and intellectually fought for their freedom. Archaeological surveys at Prospect Bluff and along the Apalachicola River will

hopefully reveal data to interpret these Maroons' stories and provide valuable historical information to the communities throughout the Apalachicola region.

Broughton, Laura

[283]

Pittsburgh's Chinatown: A Study of Chinese Diaspora Archaeology in Pittsburgh, Pennsylvania

During the nineteenth century, there was a dramatic increase in emigration out of southern China, with many moving to the United States. With the move of Chinese immigrants into the United States, Chinatowns also began to develop in urban centers throughout the country. Chinese diaspora archaeology studies these communities, with a majority of the work done in the western United States where the communities were often most concentrated. However, after the end of the Gold Rush and the Transcontinental Railroad, Chinese diaspora communities began to spread east, with a community settling in Pittsburgh, Pennsylvania in the 1870s. This Chinatown, much like other East Coast Chinatowns, has had very little research done on the community that lived there. This thesis focuses on Pittsburgh's Chinatown through historical research, geospatial analysis, public outreach, and geophysical survey to explore the size, layout, and impact of the Boulevard of the Allies on the Chinatown. The goal of this research is to both gain an understanding of the community that lived there, as well as the true extent of the Chinatown in its prime to show how the expansion of roads near the Chinatown contributed to its decline.

Brouwer Burg, Marieka (University of Vermont)

[129]

Chair

Brouwer Burg, Marieka (University of Vermont) and Rachel Horowitz (Washington State University)

[129]

The Effect of Gender Imbalances in Mesoamerican Lithic Studies

While more women than men are getting PhDs in archaeology today, female lithicists continue to be outnumbered by their male counterparts. This is in part a result of outdated gendered conceptions about who can do certain types of archaeological field and laboratory work and also related to deeply seated Western notions of male versus female tasks and domains. In Mesoamerica, lithic studies align with these outdated gendered conceptions and, we argue, the lack of diversity among lithicists has impacted the types of research questions asked, the analyses conducted, and the interpretations made, effectively leaving many stones unturned, or under-investigated. We chronicle the contributions of female lithicists working in Mesoamerica in the last half century, paying close attention to the impact of regional differences in approaches to lithic studies in Mesoamerica. We conclude by recommending avenues by which lithic studies can become more inclusive and collaborative and how the subfield can be more equitably encouraged among budding archaeologists.

Brouwer Burg, Marieka [295] see Harrison-Buck, Eleanor

Brouwer Burg, Marieka [172] see Van Keuren, Scott

Brown, Antony (Arctic University of Norway, Tromsø), Andreas Lang (University of Salzburg, Austria), Francesco Ficetola (University of Milan, Italy), Kevin Walsh (University of York, UK) and Daniel Fallu (Arctic University of Norway)

[113]

Ancient and Medieval Agricultural Terraces in Italy: Chronology, Geoarchaeology, and sedaDNA

Agricultural terraces are ubiquitous in the Mediterranean. The pan-European TerrACE Project has been using new methods to deepen our understanding of the chronology and cultural ecology of terraces. The terraces investigated in Italy span later-prehistory to the post-medieval period. We have applied portable luminescence (pOSL/pIRSL), luminescence dating (OSL), and ^{14}C for dating with a combination of pXRF and

thin-section micromorphology for soil history, as well as phytoliths and sedimentary ancient DNA (sedaDNA), to determine crops and livestock. The sedaDNA of these terraces proved to be better preserved than expected and this will be one focus of the paper. Although these methods have met with variable success, between them they have allowed chronology, history, and crop use to be determined for most sites. Some terraces at Soave are prehistoric but most represent medieval agricultural intensification associated with changes in urban fabric and control. The Sicilian site was constructed in the eleventh century AD and was reconstructed in the post-medieval period. SedaDNA and phytoliths reveal a wide variety of fully Mediterranean crops and fodder-plants from vines to figs. Collectively the sites reveal how cultivation terraces are archives of both macro and molecular evidence of agricultural, landscape, and cultural history.

Brown, Antony [113] see Fallu, Daniel

Brown, Clifford [157] see Neff, Hector

Brown, Dakotah [99] see Sammons, Claire

Brown, David (University of Texas, Austin)

[220]

Chair

Brown, David (University of Texas, Austin) and Mark Willis (Mark D. Willis Consulting)

[220]

A Tenuous Prize: Archaeology of the Inka Conquest of Northern Highland Ecuador

The numerous Inka forts in northern highland Ecuador, more than reported from most other imperial provinces, suggest preoccupations with the region and its inhabitants. The Barbacoan-speaking locals were indeed powerful and a potentially difficult conquest, as attested to by their gigantic earthen platform mounds and extensive raised fields that could support a large population. After a tough battle between Tupaq Inka and the Quitos, the Inka prevailed but ongoing concerns led to the construction of the massive Inka military installation at Pambamarca, one of the largest and most complex military installations in the prehispanic New World. With nearby mitmakuna from Inka-controlled Cañar, the Quinchuajas fortresses would stand as a bulwark at the northeastern corner of the empire for years, perhaps until the rebellion of the local Cochasquí and Caranqui peoples brought Tupaq's son Wayna Qhapaq back north to build more forts. After costly losses he at last prevailed, and fortunately, architectural differences between forts built by father and son offer an archaeological approach to understanding Inka strategies of conquest and acculturation within the framework of two different and distinctive imperial periods. Ultimately, while the historical context of the conquests varied, both emperors struggled despite their massive armies and sophisticated tactics.

Brown, Emily (Aspen CRM Solutions)

[322]

Discussant

Brown, James (Northwestern University) and Michael Wiant (Illinois State Museum)

[204]

The Deep-Site Excavation Strategy at the Koster Site

By 1972 the exposure of deeply buried occupation surfaces was a novelty in the Midwest. In Illinois, deep-site excavation experience was limited to the Modoc Rock Shelter exploration. Koster offered a new opportunity for a deep-site exposure, but one that raised significant engineering challenges. The requisite broad exposures had to be achieved in a stepwise fashion. For the Koster site, that goal was achieved by excavating

a step six feet across for every six feet the work proceeded downward. This procedure was dictated by the discovery that the site's loess sediments were undermined by a slow seepage of water from its surroundings. The result was an unparalleled view of an Early Archaic occupation although the excavation that had the appearance of an open-pit mine instead of series of isolated squares into deeply buried layers.

Brown, Jordan [139] see Maher, Lisa

Brown, M. Kathryn (University of Texas, San Antonio)

[74]

Discussant

Brown, M. Kathryn [251] see Ebert, Claire

Brown, M. Kathryn [32] see Nowakowski, Lauren

Brown, M. Kathryn [251] see Yaeger, Jason

Brown, Matthew A. (Farmingdale State College), Cory Look (Brooklyn College), Reg Murphy (Museum of Antigua and Barbuda) and Tamara Varney (Lakehead University)

[135]

Mortuary Practices at the Precolumbian Site of Indian Creek, Antigua: Preliminary Results

This paper discusses the preliminary results from recent excavations at Indian Creek, Antigua, that have helped identify, document, and recover four late period Saladoid burials. Despite this being the longest continuously inhabited site on Antigua, and one of the longest continuously inhabited sites in the Caribbean, only one other complete burial has been recovered from this site. These excavations offer a glimpse into the mortuary practices of late Saladoid people with regard to burial position and geographic location within the site in addition to cultural practices such as cranial modification and artifact and ecofact inclusion. This research marks the first systematic excavations used to explore areas outside of the deeply stratified middens surrounding the site with the goal of gaining a better understanding of mortuary practices and how space was utilized during this period on Antigua. We also look to compare our results with other precolumbian burial sites in the Caribbean. Lastly, we will discuss some of some ongoing and future research related to isotopic dietary reconstruction and identifying genetic relationships between these individuals using aDNA.

Brown, Matthew T. (University of Michigan) and Hubert Quispe-Bustamante (Zuayer Consultores y Ejecutores SAC)

[299]

Unraveling the Political and Economic Complexities of Late Formative (600 BCE–CE 200) Cusco: A View from Muyumoqo

Despite the archaeological significance of the Cusco region, research on societies that preceded the Inka in their heartland have lagged behind other areas. In particular the Late Formative (600 BCE–CE 200) presents a time of increasing social complexity, increased participation in interregional trade networks, and potential political competition between rival polities. Existing survey and excavation data indicates the rise and fall of several potential polities. Despite this insight, our understanding of the processes behind how these polities grew and what their relations were with one another as well as other regions outside of Cusco remains unclear. This paper focuses on one hypothesized center, Muyumoqo, and evaluates earlier hypotheses about the site's occupational history, relationship with neighboring sites, and its role in the wider Cusco region. In addition to focusing on Muyumoqo as a case study, this paper reevaluates survey and previous excavation data from sites in other regions of Cusco to better understand the socioeconomic, political landscape, and daily life during the Late Formative.

Brown, Matthew T. [171] see Larsen, Leah

Brown, Nicholas (Yale University)**[81]***Monumental Afterlives of Chavín Mountains at Chawin Punta and Kunturay in Pasco, Peru*

The breakdown of Chavín interregional networks at the end of the Early Horizon had variable outcomes for high-altitude ceremonial centers in the Central Andes of Pasco, Peru. Within the Chaupihuaranga Canyon, neighboring mountaintop monuments have distinct sociohistorical trajectories that complicate temporal arguments about the post-Chavín abandonment and resettlement of sites at the end of the Early Horizon and beginning of the Early Intermediate period. This paper employs a novel chronological framework of “monumental eras” to track the periodic shifts in how past people engaged with the already ancient stone heritage atop canyon ridges. In light of the vitality and agency of stone in Andean ontologies, this paper recounts the long lives of monumental mountaintops to illustrate how their changing relationships with humans forged new social organizations during the late first millennium BCE and early first millennium CE. Excavations at Kunturay reveal that its platform building episodes continued during the late first millennium BCE long after monumental construction had ceased at Chawin Punta. By the second century CE, people had resettled Chawin Punta and built houses atop its sunken circular plaza, marking a major change in humanity’s relationship with mountain worship at this sacred site.

Brown, Troy [286] see Godhardt, Ava

Brownstein, Korey [190] see Zimmermann, Mario

Bruhns, Karen (Fundacion Nacional de Arqueologia de El Salvador)**[157]***The Ceramics of Cihuatan, El Salvador: Between Two Worlds*

Cihuatan, El Salvador, appears to have been the southeasternmost Maya city. Dating to the Early Postclassic, it shows clearly the internationalizing tendencies of the time period in its ceramics. Although most are local versions of widespread Early Postclassic Mesoamerican types (or actually imported as in the case of Tohil Plumbate), a certain number of styles hark to lower Central America, suggesting that although mainstream Mesoamerica was a strong influence, the southern neighbors were known and their ceramic arts appreciated.

Bruhy, Simone [330] see Richards, Emma

Bruner, Grant [12] see White, Chantel

Bruno, Maria [217] see Hastorf, Christine

Bruno, Maria [306] see Hu, Di

Brunso, Karen (Chickasaw Nation)**[66]***Moderator***Brunso, Karen (Chickasaw Nation), Julia Prince-Buitenhuis (CalTrans) and David Witt (University of Buffalo)****[293]**

What Is CRM’s Origin Story: How Did We Get to the System We Have Now and What Does It Say about Our Future?

How did the current regulatory archaeology system form? What lessons can we learn from how the system was set up? What do these past accounts say about the future of cultural resource management? As part of a historical review stemming from the SAA Government Affairs Committee's survey regarding the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, we look at the past to understand what it says about how we got where we are and the future of cultural resource management.

Brunso, Karen [293] see Prince-Buitenhuys, Julia
Brunso, Karen [293] see Witt, David

Brunson, Katherine [173] see Thomas, Dayna

Bruwelheide, Kari [311] see Comer, Elizabeth

Bryant, Laura (Gilcrease Museum), Marla Taylor (Robert S. Peabody Institute of Archaeology) and Laura Elliff Cruz (School for Advanced Research)
[73]

Considerations for Your Stewardship Journey: The Indigenous Collections Care Guide as a Resource

Museums and academic institutions are beginning to reexamine their collections stewardship and daily practice by inviting Indigenous voices and perspectives into the conversation. This is becoming particularly relevant with the proposed addition of duty of care to the NAGPRA regulations. However, knowing where and how to start can be overwhelming—especially while advocating for change within your institution. With funding and partnership from IMLS and the School for Advanced Research Indian Arts and Research Center, the Indigenous Collections Care (ICC) Working Group is creating a guide, which will be a reference tool for institutions that interact regularly with Indigenous collections. The guide will not teach museums how to specifically care for each item, since these vary among each community. It will instead offer achievable considerations and templates for implementation, advocacy, and creation of policies and procedures. This guide does not replace consultation or the repatriation process—instead, it is meant to help guide those conversations and provide a framework. This presentation will discuss the development of the guide and how it can be a tool for stewarding sensitive cultural heritage.

Bryant, Laura [72] see Taylor, Marla

Bryce, William (Logan Simpson; Southwest Archaeology Research Alliance), Gavin Wisner (Logan Simpson) and Sidney Rempel (Argonne National Laboratory)
[52]

Architectural and Technological Analyses from a Pueblo III Slab-lined Pit Structure in Northeastern Arizona

Teaming with the Navajo Division of Transportation, Dibble Engineering, and the Navajo Nation Heritage & Historic Preservation Department, Logan Simpson recently completed data recovery for the Dennehotso Loop Road Improvement Project on the Navajo Nation in northeastern Arizona. Within the area of potential effects data recovery resolved adverse effects to the southeast portion of a large pre contact habitation, locally known as “Many Homes,” inhabited from the Basketmaker III to Pueblo III periods (ca. AD 600–1300). Feature 58, an idiosyncratic slab-lined pit structure, was one of 18 features within the APE and contained a diverse assemblage of ceramics, lithics, worked faunal bone, and various artiodactyls, turkey, and small game animal remains. Maize cob fragments from the floor fill date the structure to 1028–1162 cal AD, while ceramics provide a mean ceramic date of AD 1117. Upright tabular sandstone construction of the structure includes an east wall with pecking possibly representing astronomical patterns. In this presentation, we discuss the material remains and architecture to elucidate activities within the structure.

Bryce, William [103] see Harry, Karen

Bryce, William [306] see Whittaker, John

Brzezinski, Jeffrey (University of Colorado, Boulder) and Guy Hepp (California State University, San Bernardino)

[210]

Ritual Transformation in Formative Period Oaxaca: A Comparative Analysis of Deity Impersonation, Nagualism, and Hybrid Beings

A hallmark of ancient Mesoamerican art and religion is the ability of powerful ritual practitioners, sometimes referred to as “shamans,” to transform themselves. The Olmec were-jaguar is probably the best-known example of the phenomenon. However, artifacts from different regions of Mesoamerica demonstrate that this was a diverse set of beliefs and practices involving a variety of animal and spiritual entities and a generally permeable boundary between humans and other beings. In this paper, we trace the archaeology of ritual transformation in Formative period (2000 BCE–250 CE) Oaxaca, Mexico, from a comparative and diachronic perspective. The Formative period witnessed the elaboration of the concept of transformation, whereby people gained access to metaphysical powers and negotiated a range of societal roles by transforming their bodies. As links between the physical world and other dimensions, altered bodies may reflect negotiated relationships among people, animals, ancestors, deities, landforms, and many more other-than-human beings. We examine archaeological and iconographic evidence from highland and coastal Oaxaca, including indications of masked deity impersonation, nagualism, and divination. By taking an explicitly relational approach, we consider the affective energies of these occurrences as distinct ways of knowing the world, engaging and modifying the senses, and acquiring knowledge.

Buchanan, Meghan (Auburn University), Melissa Baltus (University of Toledo) and Sarah Baires (Eastern Connecticut State University)

[82]

Climate Change and Environment in Cahokia's History

Archaeologists, particularly in the Southeast, have often looked to the environment and climate change to understand the evolution of past societies. Droughts, floods, and environmental degradation have been implicated in the rise and fall of societies, especially Mississippian period societies like the city of Cahokia. Despite calls to provide more holistic interpretations of places like Cahokia, agency, history, and practice are frequently relegated to the background and environmental processes are elevated as primary causal factors precipitating culture change. In this presentation, we consider environment and climate change at Cahokia from a relational perspective, drawing from Indigenous philosophies of locality, place-thought, kinship, and reciprocity, to provide an avenue for more nuanced understanding of how people negotiated their relationships with the inhabited world—including how climate change might have been interpreted as embedded within and stemming from those relationships. Climate, while important, cannot necessarily be considered a primary driver, as environments and their inhabitants were among many significant relationships that factor into the choices and histories of past (and present) people.

Buchanan, Meghan [72] see Lofaro, Ellen

Buckley, Gina (University of Algarve), María Fernanda García Hurtado (Universidad Nacional Autónoma de México), Chad Rankle (University of California, San Diego), Seth Roberts (University of Missouri Research Reactor) and Virginie Renson (University of Missouri Research Reactor)

[69]

Lead Isotopes as a Tool for Identifying Human Mobility in Central Mexico

Lead isotopes have successfully been used in archaeology to trace artifact provenance and, more recently, to study human paleomobility through skeletal remains in regions with traditionally temperate climates, such as Europe. However, very few environmental lead isotope baseline studies have been conducted for the

Americas, where anthropogenic lead contamination in the environment tends to be high, and even fewer studies have tested the feasibility of analyzing lead isotopes in human enamel in this region, where skeletal preservation tends to be poor. The study presented here investigates the use of lead isotopes for paleomobility research at the site of Teotihuacan in central Mexico (AD 1–550). Preliminary results are provided for lead isotope baseline development in the Basin of Mexico using rock and soil samples. The labile fractions of the soils were extracted and analyzed to determine if modern-day lead contamination in the environment affects the natural lead isotopic signatures of these soils. The initial results of lead isotope analyses in human enamel will also be presented.

Buckley, Gina [188] see Rankle, Chad

Buckley, Gina [236] see Thakar, Heather

Buckley, Michael, Manasij Pal Chowdhury (University of Manchester), Fabienne Pigiere (University College Dublin), Jessica Smyth (University College Dublin) and Cheryl Makarewicz (Kiel University)

[334]

Combining Proteomic Sex Determination of Archaeological Remains with Isotopic Analyses for Understanding the Development of Animal Husbandry

Proteomic techniques are being increasingly used in bioarchaeological applications to improve understanding of the human past. However, few studies have focused on the study of tooth enamel for sexing in archaeofaunal remains despite initial studies over a decade ago looking at human teeth. Here we use of LC-orbitrap-MS/MS for identifying the sex of archaeological cattle and sheep remains in comparison to humans from a range of sites across Europe. Through combination with carbon, nitrogen, and oxygen isotopes, these biomolecular techniques have the potential to better understand the evolution and development of animal husbandry practices. However, with proteomic sex identification being still in its infancy, there are several key limitations that need to be further investigated, largely relating to the unconventional methods utilized. These limitations and the extent to which they differ relating to the taxon being investigated will be discussed, as well as latest advances in improving these methods.

Buckley, Michael [259] see Oliveira, Cristina

Buckner, Paul (HDR)

[329]

A River Runs through It: Placing Vicksburg in Context through an Analysis of Late Coles Creek Culture (1000–1200 CE) Land Use in the Lower Mississippi Valley

HDR's recent investigations in Vicksburg National Military Park (VNMP) identified multiple precontact sites composed of extensive ceramic scatters. A typological analysis of nearly 300 sherds suggests these occupations are associated with the transitional Coles Creek culture of the Late Woodland/Early Mississippian period, specifically the redefined Kings Crossing phase (1000–1200 CE). Coles Creek culture is notable for growing social complexity and intensifying landscape modification, trends which occur alongside increasing population densities during a period of climate stability and greater effective moisture throughout the Lower Mississippi Valley (LMV). Within VNMP, the newly identified Kings Crossing phase sites are interpreted to represent outlying settlements of Kings Crossing (22Wr537), the multi-mound, monumental center type site for this phase. To better contextualize the precontact occupation of VNMP, this study employs an eco-cultural niche modeling approach to address questions surrounding Late Coles Creek culture settlement organization, monumentality, and land use in the greater LMV. The results of the analysis have the potential to yield new insights into Terminal Woodland occupation of VNMP, the adoption of Mississippian ideas by an essentially Woodland society, how that society perceived and constructed landscapes in the LMV, and the role of outlying settlements in shaping these landscapes.

Buckser, Sarah (University of Colorado, Boulder), Karissa Hughes (University of Oklahoma), William Taylor (University of Colorado, Boulder), Fernando Villanea (University of Colorado, Boulder) and Courtney Hofman (University of Oklahoma)

[200]

Exploring Early Historic Human-Canid Relationships in the Intermountain West: A Case Study from Seventeenth-Century Blacks Fork, WY

Between the sixteenth and seventeenth centuries, Indigenous cultures of North America began utilizing domestic animals brought to the Americas by Spanish colonists, creating profound social, cultural, and ecological change. In the northern Rocky Mountains, domestic horses provided new opportunities for transport and travel—but our understanding of how new human-horse relationships articulated with preexisting human-animal relationships is still limited. Blacks Fork, WY, is uniquely suited to provide more archaeological insight, as it features the seventeenth-century deposition of an Indigenous domestic horse skeleton with three, morphologically ambiguous, canid skulls. To explore human-canid relationships at Blacks Fork, and their possible associations with human-horse relationships, we used mitochondrial DNA extraction and analysis, craniometric examination, and paleopathological examination to identify species, age, health, and relevant trauma for each of the canid specimens. Our results suggest that the Blacks Fork canids were likely three healthy, young adult, wild coyotes or coyote-dog hybrids, which people hunted, killed, and disarticulated for ritual deposition at Blacks Fork. Our findings provide archaeological evidence for the antiquity of human-coyote relationship in the Rockies and reveal information about the shifting roles of wild and domestic animals during a time of rapid transformation in the North American west.

Budar, Lourdes (Universidad Veracruzana)

[163]

Discussant

[163]

Chair

Budar, Lourdes (Universidad Veracruzana)

[216]

Los complejos arquitectónicos para el Juego de Pelota en la Costa de Los Tuxtles

En esta presentación se darán a conocer los resultados de las investigaciones realizadas acerca los Complejos Arquitectónicos para el Juego de Pelota que han sido registrados en la Costa de Los Tuxtles.

Budar, Lourdes [216] see Venter, Marcie

Budd, Tommy [329] see Lewis, Cheyenne

Budziszewski, Adam (University of Warsaw), José Luis Punzo Díaz (Centro INAH Michoacán) and Alfonso Gastelum-Strozzi (Universidad Nacional Autónoma de México)

[106]

Let's Shed Some Light: Computed Tomography and GIS in Bioarchaeological Analysis of Funerary Urns from Los Tamarindos Cemetery, Tierra Caliente, Michoacán

Spatial distribution and relations between the osteological material and grave and/or pyre goods within cremation funerary urns are crucial aspects of the bioarchaeological analysis of cremation burials. Through meticulous examination of material distribution, valuable insights can be gleaned regarding the behavior of mourners—shedding light not only on how the remains were collected and placed into the grave but also on postdepositional processes that significantly influence the preservation of archaeological and osteological material. In recent years, noninvasive documentation methods such as computed tomography (CT) have gained prominence in the study of cremation burial practices. Despite the great potential of this method, we note limitations that do not allow us to fully understand the cremation burial rite without exploration of the

funerary urns. We studied cremation burials from the Los Tamarindos cemetery, Tierra Caliente, Michoacán, documenting the spatial distribution of the material via CT images. In this presentation, we propose integrating geographic information systems (GIS) to enhance imaging and spatial analysis, offering transparent results and precise data presentation.

Buehlman-Barbeau, Savanna (University of Toronto)

[255]

The Susiana Legacy: A Discussion on the Ceramic Petrographic Analysis of Legacy Collections from Iran's Susiana Plain

The Susiana Plain of southwestern Iran has a long history of archaeological investigation, perhaps most notably at sites such as Chogha Mish and Susa. Scholars have demonstrated the Susiana Plain as a place of interregional connection and distinctive material tradition. However, though interest in the broader region surrounding Susiana persists, the intensity of study has slowed considerably, and much of the material recovered from excavations in decades past remains largely untouched in museum storage. This paper specifically uses the archaeological material of previous excavations, now housed in museum storage, to assess the attributes of fifth and fourth millennium BCE pottery. Methods of ceramic petrography are used to examine and compare technological characteristics between sites and over time. This analysis aims to bring the Susiana communities into conversations of contemporaneous pottery practices in neighboring regions; furthermore, this paper offers discussion on the challenges, and rewards, regarding the use and study of legacy collections.

Bueno, Lucas (Universidade Federal de Santa Catarina) and Juliana Betarello (TEMIS)

[9]

People on the Move: Early Peopling of Central Brazilian Plateau, Eastern South America

The aim of this presentation is to discuss the peopling process of the Central Brazilian Plateau through the study of archaeological sites located in the Middle Valley of the Tocantins River. The Central Brazilian Plateau is the region where there are the earliest dates available for the occupation of eastern South America; therefore, it is a crucial area for discussions on the Initial Peopling of South America. The sites selected for the present research present evidence of being occupied since the end of the Pleistocene, and thus, they have an enormous potential for discussing the age and dynamics of the occupation of the inner South American continent. The case of the Middle Tocantins area draws attention to the need for a contextual approach to studying the dynamics of interaction between human behavior and environmental variations and the need for a complex look at the articulation arrangements between the archaeological record and the behavioral interpretation. We expect to contribute to a wider discussion about the dynamic involved in the occupation process of uninhabited or poorly inhabited areas, as well as on the interactions between human behavior and environmental variations. Therefore, we will work with key concepts such as technology, mobility, territory, and territoriality.

Buff, Carolyn [177] see Becker, Rory

Buikstra, Jane (Arizona State University)

[241]

Discussant

[204]

Chair

Buikstra, Jane (Arizona State University)

[204]

In the Beginning: Stuart Struever and the Lower Illinois River Valley (LIV)

This introductory paper for the symposium recognizing and celebrating the seminal contributions of Stuart

Struever to Midcontinental archaeology begins with his earliest regional project at the Kamp Mound Group. Legend has it that Struever became lost traveling to St. Louis. On highway 100, north of Kampsville, he saw a landowner bulldozing a portion of the Kamp Mound Group, paused, and asked if he could conduct an archaeological excavation instead. Thus, the 1958 and 1959 field seasons began a 26-year regional archaeological program directed by Struever, centered in Kampsville. The Kamp excavations anchored 65+ years of productive LIV bioarchaeology. Following the Kamp Mound analysis, his MA thesis at Northwestern University, Struever pivoted to village sites and regional surveys during the 1960s. Flotation developed, and with it the transformative paleobotanical and paleofaunal studies that helped define the Eastern North American Agricultural Complex (EAC) and the significant role of freshwater resources. The profoundly interdisciplinary Koster site excavations dominated the period between 1969 and 1979, with geoarchaeology assuming an increasingly prominent role. Struever's contributions to ceramic analysis and chronology were also foundational, as was the west-central Illinois Contract Archaeology Program. As Struever's concept for archaeological research expanded, the LIV's role diminished, ending in 1984.

Buikstra, Jane [241] see Cerezo-Román, Jessica

Buikstra, Jane [241] see Cormier, Aviva

Buikstra, Jane [241] see Hannigan, Elizabeth

Buikstra, Jane [241] see Karligkioti, Anna

Buikstra, Jane [241] see Rothwell, Jessica

Buikstra, Jane [241] see Stamer, Julianne

Bullion, Elissa (Oregon Legislative Commission on Indian Affairs [LCIS])

[300]

Collaborative Approaches to Ancestral Remains Protection, Recovery, and Repatriation in Oregon

The sale, trade, and otherwise mistreatment of human remains is an issue impacting a diverse institutions and entities, from sovereign Tribal nations, to universities, to law enforcement. This unethical and illegal behavior can be found in a wide range of digital and analogue venues, often making it difficult to trace the origins of both the seller and the individual whose remains are being sold. In the state of Oregon, a collaborative approach between Tribes, state agencies, and law enforcement is being used to target human remains sales and trafficking. Strategies include the creation of new positions, the development and dissemination of educational materials, and phased outreach to individuals engaged in sales. The core of this collaboration is constant, committed engagement and communication between state, federal, and Tribal partners. Information and resource sharing allows every organization to be more effective in this effort than if each were to stand alone. While many of the initiatives in Oregon are still new or being developed, they show promise in their ability to recover human remains. It is our hope that these approaches can help develop similar programs beyond Oregon.

Buonasera, Tammy (University of Alaska, Fairbanks) and Shelby Anderson (Portland State University)

[20]

Molecular and Isotopic Analysis Indicates Variable Uses for Early Pottery from Northwest Alaska

Ceramic technology was adopted approximately 2,800 to 2,500 years ago in Alaska, coinciding with a transition toward an economy increasingly focused on marine resource use. Despite expectations for marine resource use in early northern pottery, an initial pilot study found strong evidence for freshwater aquatic and/or mixed terrestrial/aquatic resource processing in a small sample of early sherds. The current study investigated this trend in greater depth using lipid and isotope analysis to detect the past uses of more than 120 early pottery sherds from coastal and interior/riverine contexts in northwestern Alaska. The dominant character of the residue was compared to results from isotope mixing models and the osteofaunal record to assess cooking practices with regard to patterns of resource use. Results indicate that pottery was used to cook or render oil from primarily marine and freshwater/brackish resources, however caribou processing appears to have been more common in pottery than previously recognized and anadromous fish were less represented than expected, possibly because they tended to be cooked in different ways.

Buonasera, Tammy [272] see Fournier, Nichole
 Buonasera, Tammy [20] see Haas, Randy

Burant, Eric
[330]

Stand by the Gray Stone: GIS and Spatial-Temporal Applications at the Milwaukee County Poor Farm Cemetery
 I am immensely grateful to have had Dr. Patricia B. Richards as a professor, supervisor, and mentor throughout my academic pursuits. Her long and distinguished career has been exemplified by a fierce and unwavering focus to provide her students with the tools needed to successfully apply advanced archaeological methods and research schemes to a variety of topics. Her innovative approach has always accepted new techniques and practices that continue to drive a scientific approach to Midwestern archaeological studies. This paper will highlight some of the ways in which Dr. Richards has successfully applied GIS spatial technologies to the study of historic cemeteries. Spatial-temporal studies at the Milwaukee County Poor Farm Cemetery (MCPFC) have been applied to numerous collaborative research projects. Understanding space and place follow an intellectual legacy that began early in her graduate school career at University of Wisconsin, Milwaukee and has been continually adopted in strategic ways by her students and colleagues.

Burch Joosten, Katrina (McGill University), John Warner (University of South Florida, Sarasota-Manatee) and Giles Morrow (Vanderbilt University)
[30]

Archaeological Immersion and the Rhythmanalysis of Place: Experimental Virtual Reality Spatial Analysis at Jatanca (Je-1023), Peru

The phenomenon of place as it is rhythmically embodied, akin to a fabric that is collectively worn and interwoven over successive generations, unfolds at the center of our presentation. We explore the intricate meshwork of place-making, applying an immersive VR reconstruction of the Late Formative period site of Jatanca (Je-1023) as our methodological lens to examine the subtleties of spatial perception, locomotion, and the profound interconnections between embodiment and divergent rhythms in the fabric of Jatanca's everyday life. Through immersive analyses of pre- and post-plug alterations to Jatanca's monumental architecture, we broaden archaeological interpretations to imagine agrarian ceremonial place-making, emphasizing the corporeal, sensorial, and temporal dimensions of its taskscapes. The uncanny virtual realism to navigate in immersive VR reconstructions demands attentional awareness, thus complementing phenomenological insights and enriching the scope of the archaeological imaginary.

Burentogtokh, Jargalan [23] see Eklund, Emily
 Burentogtokh, Jargalan [23] see Greaves, Aspen

Burger, Joseph [219] see Tallavaara, Miikka

Burger, Rachel (Logan Simpson), Jonathon Curry (Logan Simpson), J. Andrew Darling (Logan Simpson), Thomas Jones (Logan Simpson) and Andrea Gregory (Logan Simpson)
[88]

The Water Is Not Wasted: Tailwater Ponds, Habitat Conservation, and the Perpetuation of Akimel O'odham Water Culture

Akimel O'odham are river people. During testing investigations for a roadway improvement project in Scottsdale, Arizona, sponsored by the Federal Highways Administration (FHWA) and Salt River Pima-Maricopa Indian Community (SRP-MIC), a historical water feature was identified. Geomorphological and archival research determined that the feature represented historical tailwater deposits, possibly associated with a historic SRP-MIC irrigation system waste ditch. Evidence for a twentieth-century tailwater pond

presented seemingly limited archaeological information potential. And yet tribal interest prompted additional ethnographic and archival research to explore the cultural significance of riparian micro-environments associated with tailwater ponds that once sustained Native Traditional Use plants (crucifixion thorn, arrowweed, etc.) and shade trees (cottonwood and mesquite). The role of these places in Community memory—for example, as *vapchki* (reservoirs)—is investigated in regard to the elimination of traditional riverine settlement by the allotment system and the introduction of large-scale irrigation and farming, traditional “water culture” (*shuudag himdag*), and as places for social gathering.

Burgess, Blaine (Chronicle Heritage), Jeffrey Ferguson (University of Missouri) and Suzanne Eckert (Arizona State Museum, University of Arizona)

[33]

Micaceous Mindsets: Chemical Characterization of Classic Period Utility Wares at Multiple Sites Along the Rio Grande

Micaceous utility wares are commonly found at Ancestral Pueblo villages along the Rio Grande and adjacent areas, yet they have received comparatively little attention relative to the contemporary well-studied glaze wares. Compositional studies show that glaze ware vessels and their ingredients were often transported across the landscape, driven by a mix of ritualistic and economic factors, but utility wares were also a common component of daily Pueblo activities and are shown to have been involved in complex exchange schemes. Neutron activation analysis is used to chemically characterize micaceous utility sherds from seven Classic period (1300–1600 CE) sites located along the Rio Puerco and Rio Grande between the modern towns of Santa Fe and Socorro, New Mexico. Five micaceous ware distribution patterns are recognized based on the spatial patterns of compositional groups present within and shared between sites. These indicate procurement and/or manufacturing similarities between the Rio Puerco and Albuquerque areas and differences to the north on the Pajarito Plateau and to the south along the Rio Abajo.

Burgio-Ericson, Klinton (Texas Tech University)

[206]

The First Bite: Archaeological Traces of Early Spanish Colonial Carpentry from Quarai and Pecos Pueblos

Primary sources attest to the training of Indigenous carpenters in early colonial New Mexican woodworking. By the 1620s, Spanish craftsmen began introducing techniques based in the widespread Iberoamerican Mudéjar carpentry vernacular, which Pueblo artisans learned and used in constructing Franciscan missions. These accounts have received little study nor testing, however, based in the presumption that the 1680 Pueblo Revolt destroyed almost all early carpentry in New Mexico. In fact, scattered archaeological traces and remnants permit a partial reconstruction of early New Mexican carpentry and processes of cultural negotiation through the medium of woodcarving. Combining the contextualizing methods of archaeology with analysis of museum collections, this paper uses the earliest known archaeological remnants of colonial woodwork to explore the transmission and significance of pre-Revolt carpentry. It relies on remnant artifacts from Quarai (ca. 1623–1628 CE) and Pecos (ca. 1620–1630s CE), now in the collections of the Maxwell Museum of Anthropology, the Center for New Mexico Archaeology, and the Pecos NHP. Surviving amid carbonized fragments and architectural remnants, the “bite” of chisels and gouges characteristic of these early carpenters speak to their technical faculty but also processes of intercultural negotiation, meaning making, and violence amid the entanglements of colonial New Mexico.

Burham, Melissa (University of Arizona)

[155]

Questioning “Centralization”: Ritual, Minor Temple Complexes, and Social Integration at Ceibal, Guatemala

The Maya site of Ceibal, Guatemala, became a preeminent center in the Pasión Region of the southern lowlands over the Preclassic period (ca. 950 BCE–350 CE). During the latter centuries of this period, minor temple complexes were built at regular intervals within the Ceibal urban center and across the rolling Ceibal horst. Although the presence of minor centers has often been linked to increased political centralization and the establishment of regional settlement hierarchies, systematic excavations in outlying

areas of Ceibal have complicated our understanding of core-periphery dynamics. The data have revealed the temples were built at different times with variable construction techniques and materials, and populations settled around them following their construction. The evidence suggests local groups built their own ceremonial precincts as they settled in new areas around Ceibal. Rituals resembling those performed in the ceremonial epicenter were also conducted regularly at the temples, revealing some people in outlying areas had access to specialized ritual knowledge from the epicenter. These outlying communities appeared to be largely autonomous yet integrated into a larger Ceibal society. This paper draws from collective action and generative planning theory to question notions of centralization and explore heterarchical sociopolitical complexity and integration.

Burk, Kyle [212] see Parker, Glendon

Burke, Chrissina [9] see Gillaspie, Amy
Burke, Chrissina [89] see Hodapp, Magen

Burke, Heather [147] see Smith, Claire

Burke, June (University of Texas, Austin)
[262]
Chair

Burke, June (University of Texas, Austin)
[262]

Shell, Trade, and Systems of Value at the Dawn of Agriculture in the Tucson Basin

Current studies on nacreous shell jewelry, those with an iridescent inner layer, during the Early Agricultural period (2100 BC–150 AD) (Vint 2017) have chiefly examined how the material was brought into the Tucson Basin without much consideration for if its presence in the region was purely due to chance or if it was specifically chosen. Central to that question is understanding how nacreous shell artifacts were valued in the region and if that differed from non-nacreous artifacts. To address this gap in our knowledge, a series of chi-square and Fisher's exact tests were conducted on the various shell assemblages recorded from 17 sites dated to the Early Agricultural period. These tests compared nacreous and non-nacreous shells across eight types of contexts and 26 stylistic forms in order to see if either shell material was found more or less frequently in any particular context or fashioned into any particular form. The results from these tests suggest that nacreous shell material was used and valued independently, with clear connections to mortuary practices. Additionally, these results reaffirm previous hypotheses on the origin of nacreous shell in the Tucson Basin and suggest regional differences in shell use across the study area.

Burke, Tommy [46] see Malone, Gráinne

Burkett, Justin (University of Missouri)
[333]

How Houses Become Haunted: Folklore Traditions as Archaeological Context

Anthropology and archaeology strive not only to reconstruct the physical characteristics of the past world but to understand how past people thought about the world around them. The way people think gets encoded in magical frameworks in both physical objects like monuments and dwellings, as well as in less permanent expressions, like music, foodways, and folklore. Folklore, and especially storytelling, acts as a transmission system between listener and audience in which story elements become cultural shorthand. As a

part of folkloric traditions, ghost stories are not just superstitious entertainment pieces, but often have educational or moralistic value for the listeners. Even if the teller or their audience does not believe in the factual truth of the story, the pieces of the story emerge from a cultural lexicon of understanding. Ghost stories, especially when describing places, people, and things in the real world, indicate legitimate cultural relationships among those things. This paper explores a set of ghost stories from Missouri by modeling recurring story elements in relation to place and archaeological/historical sites to indicate how folklore informs understandings of culture and belief.

Burkhart, Mackenze [324] see Humphreys, Stephen

Burks, Jarrod (Ohio Valley Archaeology Inc.)

[105]

Using Geophysical Survey to Relocate Missing World War II–Era American Graves and a Large Postwar Unmarked Cemetery near Stalag Luft VI, a German POW Camp in Macikai, Lithuania

In 1944, on separate occasions, three US military airman died while interned at the Stalag Luft VI German prisoner-of-war camp in what is now the Village of Macikai, Lithuania. All three were interred in a small burial area, along with at least one other (a Canadian airman), located outside the camp perimeter fence. While accounts of this burial area's location, along with ground-based photographs, are readily available, its exact location has been lost since the war. In 2019, in partnership with the Defense POW/MIA Accounting Agency, Ohio Valley Archaeology Inc. was tasked with locating the American burials by conducting geophysical surveys on three areas selected based on burial detail accounts. Ground-penetrating radar and magnetic gradiometry were used to survey all three areas (2.8 ha). Probable and possible graves were detected in three locations, including in a small area consistent with the burial accounts and a large triangular area with at least 1,000 previously unknown graves. Subsequent excavations have (1) confirmed the presence of graves, (2) resulted in the recovery of the three Americans, and (3) confirmed the presence of a large, previously unknown postwar cemetery associated with the Russian gulag that repurposed Stalag Luft VI.

Burks, Jarrod [283] see Flores, Alexandra

Burks, Jarrod [105] see Pecora, Albert

Burnett, Jeff, Fred Handcock (Martha's Vineyard Commission), Ifeoma Ekwuocha (Independent Researcher) and James Richardson (Carnegie Museum of Natural History)

[172]

Mapping the Historic Baptist Tabernacle in Oak Bluffs, Massachusetts

In August 2023, an archaeologist from Michigan State University and participants living and vacationing on Martha's Vineyard, an island off the coast of Massachusetts, documented and mapped the remnants of a nineteenth-century Baptist Camp Meeting site in Oak Bluffs. Utilized by Baptist groups for weeklong revivals from 1875 until ca. 1930. The Baptist Temple Park site is important to the recent history of Oak Bluff. Today the Baptist Temple and the revivals held there are seen as part of the story of why many families first moved to the area and as one of the core reasons there is now, and has historically been, a strong history of African American homeownership in the Highlands and East Chop regions. Our investigation in Baptist Temple Park mapped the remnants of the temple structure and the walking paths throughout the park. Preserving the location of these remnants and describing them in detail will help us better understand the location of the Tabernacle, its construction, and its physical and historical orientation to the neighborhoods around it. The investigation also serves as an entry point for introducing archaeology as a tool for investigating and preserving the past in Oak Bluffs.

Burnett, Paul (SWCA Environmental Consultants), Kristin Barker (Beyond Yellowstone Program) and Lawrence Todd (University of Wyoming)**[171]***Elk and Archaeological Models in the Shoshone National Forest*

Since 2009, we have been modeling archaeological probability in the Shoshone National Forest. These have been continually refined as new data become available. Now, using newly available elk collar data, we compare patterns in the archaeological record with those of elk movements to evaluate correlations. We compare elk locations with archaeological probability and model elk probability using the same suite of environmental parameters. The elk probability models identify their potential past occupation or migration areas, and the archaeology near these areas may signify past procurement locations that have since been abandoned. We will present these models for further consideration in relating migration corridors to the archaeological record.

Burnett, Paul (SWCA Environmental Consultants)**[336]***Discussant*

Burnette, Amy [153] see Dunham, Sean

Busby, Ashley (Shumla Archaeological Research & Education Center)**[282]***Painting Methods and Process: A Compositional Analysis of Pecos River–Style Murals*

A compositional analysis of pictographs of the Lower Pecos (LP) Canyonlands, located in Southwest Texas and Northern Mexico is presented. The complex systems utilized by LP artists in their painting process are examined, including symmetrical organization of forms and intentional arrangements of figures in a scene (typically a portion of the site). A dimensional analysis of the paintings include on-site measurements and experimental reproductions of common mark-making techniques. An analysis of the formal elements of shape, line, space, and diversity of mark-making in these paintings demonstrates the ways in which LP artists built expressive, visual narratives.

Bush, Leslie [57] see Costa, August

Bush, Leslie [332] see Hanselka, Kevin

Busquest-Vass, Geraldine [201] see Neff, Nadia

Bussiere, Lauren (Texas Archeological Research Laboratory, University of Texas, Austin)**[305]***It's Our Mess Now: Changing Values, Problematic Legacies, and Visioning Change in Archaeological Collections Management*

In recent years, many leadership positions at archaeological repositories and museums have been filled by a new generation of archaeologists, collections managers, and curators. These early- and mid-career professionals' education and training has taken place since the enactment of NAGPRA, and our lived experiences have been marked by the growth of the digital world, climate change, and acute awareness of structural inequalities. As such, many of us bring to our work a value system that is often at odds with the principles and practices that have historically governed our institutions. As we step into these roles, we struggle to implement meaningful change within institutions burdened by insufficient resources and constrained by bureaucratic policies. We are tasked with rebuilding relationships and providing excellent collections care after decades of damaging colonial practice. This presentation explores the ways that new

leaders in this field are grappling with the problematic legacies of their institutions and presents an actionable framework to plan for and enact structural change.

Bustos, Davis [35] see Reynolds, Sally

Buti, David, Joanne Dyer (British Museum), Davide Domenici (Università di Bologna) and Danny Zborover (British Museum)
[302]

A Study of the Materiality of Codex Tonindeye: Some Preliminary Results

The Codex Tonindeye, also known as the Codex Zouche-Nuttall, is one of the most striking examples of prehispanic Mixtec historiography and artistry. Brought from Mexico to Italy, it was preserved for centuries in the Dominican convent of San Marco, Florence, until the middle of the nineteenth century, when it was sold to England. Since 1867, it has been held at the British Museum. A new multidisciplinary research project organized by the Santo Domingo Centre of Excellence for Latin American Research (British Museum) and the MOLAB mobile laboratory is currently studying the materiality of Codex Tonindeye. The close inspection of the manuscript provided new insights on its painting process, revealing the existence of deletions and repaintings, some of them never seen before. Hyperspectral imaging spectroscopy (HIS), UV-vis-NIR Fiber Optics Reflectance Spectroscopy (FORS), and External Reflection Fourier Transform Infrared Spectroscopy (ER FTIR) provided information to chemically characterize the painting materials while further techniques (XRF, Raman, RTI, microscopic imaging, etc.) will be applied in the near future. The paper presents the preliminary results thus far, both in terms of the painting materials and the painters' working method, providing a fascinating glimpse on "Mixtec historiography in the making."

Butler, RaeLynn (Muscogee [Creek] Nation)

[8]

Discussant

[WITHDRAWN]

Butler, RaeLynn (Muscogee [Creek] Nation) and LeeAnne Wendt (Muscogee [Creek] Nation)

[82]

Enhancing Southeastern Archaeology with Indigenous Cultural Knowledge: A Case Study of the Muscogee (Creek) Nation

[WITHDRAWN]

Buvit, Ian (WestLand Resources), Irina Razgil'deeva, Steven Hackenberger and Viktor Golubtsov

[93]

The Ust'-Menza 14 (Lagernaya) Site and Its Place in the Middle Upper Paleolithic of Southern Siberia

With implications affecting numerous anthropological debates, Paleolithic discoveries in Siberia are important to understand how humans initially spread across Eurasia and into the Americas. Here we introduce Lagernaya, a middle Upper Paleolithic site in the Transbaikalian Region of southern Siberia. Three ¹⁴C dates from the site's oldest cultural layer indicate a possible age >30,000 cal BP. Its stone tool assemblage is characterized by large, informal tools made on local river gravel, and smaller, more formal tools using high-quality, exotic raw material. While there are small, amorphous flake and bladelet cores, no evidence of formal wedge-shaped microblade technology exists. Given its elevation above the modern channel, and other geological and pedogenic evidence, the site was believed to be associated with the Menza River's second terrace, but it now seems that the oldest material is in a buried part of an older Chikoi River terrace. Furthermore, most, if not all, of the artifacts and features may be in a secondary context, displaced from their original location by erosional flooding. Despite these shortcomings, research at Lagernaya has the potential to

yield valuable information about the Siberian Upper Paleolithic just before, or possibly during, the Last Glacial Maximum.

Byambaa, Gunchinsuren [281] see Izuho, Masami

Bye-Jensen, Peter [93] see Nymark, Andreas

Bynoe, Rachel [225] see Marks, Theodore

Byram, Jennifer (University of Arizona)

[29]

Multi-Plied Research Methods: Choctaw Traditional Textiles and Collaborative Research on Southeast Fibers, Cordage, and Garments

Since 2018, the Choctaw Nation of Oklahoma Historic Preservation department has worked to reawaken pre-European contact knowledge of fiber technologies. Drawing on archaeological and ethnographic sources, this applied archaeology work is approached through both collaborative models of research and experimentation and community engagement. This presentation will discuss ways that communities, in this case the Choctaw Traditional Textile group, can engage with past perishable technologies through the act of making and studying extant materials alongside others in both hands-on and virtual engagements (i.e., Zoom). The Choctaw Nation Cultural Center, opened in 2021, provided an opportunity for Choctaw makers to learn and apply textile techniques including cordage production and twining to contribute to diorama exhibits. Through an iterative process, the Choctaw Traditional Textiles group has continued to refine material processing and cordage preparation techniques by engaging with extant collections and experimentation with fiber sources. This process has expanded our ability to represent and educate on the textile traditions of ancestral makers while empowering Choctaw artists and rebuilding connections to Choctaw homelands through engagement with native fibers. Finally, this applied work informs broader academic and museum archaeology fields through the presenter's dissertation research design and data collection on extant cordage and textile materials.

Byrd, Deanna (Choctaw Nation of Oklahoma)

[72]

STARR: Southeastern Tribal Alliance for Repatriation and Reburial

Presented by Alliance Member: Deanna Byrd (Choctaw Nation of Oklahoma) and other alliance members if schedules permit. The Southeastern Tribal Alliance for Repatriation and Reburial is comprised of Tribal Nations in the southeastern United States who work closely together to see the return of their ancestors and funerary objects. For this poster session, the poster will highlight the STARR alliance, its mission, and ways in which alliance members support ongoing NAGPRA efforts. This poster will familiarize participants with the STARR alliance and share a valuable resource opportunity for NAGPRA practitioners, new archaeology graduates, agencies, and members of the Society for American Archaeology.

Cabadas Báez, Héctor Victor (Universidad Autónoma del Estado de México), Georgina Ibarra Arzave (Universidad Nacional Autónoma de México), Véronique Darras (CNRS - Université Paris 1) and Sergey Sedov (Universidad Nacional Autónoma de México)

[240]

Soil Micromorphology Applied to Ceramics from Chupícuaro: The Search of Raw Materials in Volcanic Contexts

Regional geology affects the mineralogical and geochemical footprints of ceramics components, yet in relative homogeneous areas, the first approximations of ceramic petrogroups can be difficult to define. One approach

is to apply concepts derived from soil micromorphology, regarding stable elements or pedorelicts that may be preserved despite the complex history of the artifact. During the Chupícuaro occupation phases consider the dominance of sand fraction components derived from local geology (this includes the presence of volcanic glass, with some variants, as well some ignimbrite textures) including a general affectation by hydrothermalism. Particularly, in the Chupícuaro phase, ceramics with fine sand fraction components present mica group minerals and reworked clay illuviation pedofeatures. The subsequent Mixtlan phase present a minor contribution of Fe-Mg minerals and volcanic glass. A contrasting aspect is the optical activity of the clay matrices between the two occupation phases, particularly from the Mixtlan phase where it is possible to observe striated fabrics associated with manufacture traces related to the ductile-brittle state of the paste. This last technical aspect needs more detail in its characterization and comparison with the “natural” conditions of clay mineral genesis in the local soil prospection as raw materials.

Cabanzo, Almi (University of Texas Rio Grande Valley), Mozelle Bowers (Mecklenburg County, North Carolina) and Sara Juengst (University of North Carolina, Charlotte)

[70]

Life and Death: How Infant Burial Practices in Buen Suceso Reflect Social Practices, Status, and Community
Infant burials during the Ecuadorian Formative (3800–1450 BC) took several forms, including as offering deposits at ritual locations, as burials accompanying adults, and as primary burials in cemetery contexts. This variation may reflect important differences in the status of these infants, their life experiences, and/or how Formative peoples viewed infancy. In this poster, we present infant burials from Buen Suceso, a Formative site on the central Ecuadorian coast. Here, infants were buried in public spaces, in domestic/utilitarian structures, and in a formal cemetery. We compare mortuary goods, burial style and examine skeletal evidence of pathology and trauma for these individuals. Different burial locations and styles may reflect emergent ranked status, based on the distribution of pathological lesions. However, infants buried in the cemetery were more likely to be associated with ceramics, figurines, and shells, items that held significance for the Buen Suceso community. Thus, the connections between early life experiences of health, special grave goods, and burial location do not clearly depict emergent ascribed status. In this poster, we showcase how infant remains can reflect nuances in community structure and may have also been treated differently from adults as part of a larger ritual practice.

Cabral, Devyn (Vermont State University), Hannah Ferry (Vermont State University) and Matthew Moriarty (Vermont State University)

[203]

Visualizing the Vergennes Archaic: Using 3D Imaging to Highlight the Importance of Vermont's Ketcham's Island Site
The Ketcham's Island (KI) site in Brandon, VT, provides an important window into the lifeways of Vermont's native peoples in the Late Archaic period, including residential structures, extensive toolkits, and subsistence strategies. Despite the significance of Ketcham's Island to local history, though, few Vermonters are aware of the site and detailed information about the site is not easily accessible to either academic researchers or members of the general public; artifact collections are dispersed and the site itself is not easily visited. In this poster, we present efforts to bring information about the Ketcham's Island site both to a general audience and the broader academic community. These initiatives include airborne photogrammetry to bring the past environment to life, as well as 3D scanning and printing of Ketcham's Island artifacts from around the state. Artifact models are now united digitally, provided easier access to researchers, while 3D printed replicas are being used in community outreach events. Together, these efforts have produced data for more in-depth academic research and helped make the early history of Vermont come alive for members of the general public.

Cabral, Devyn [203] see Nash, Jacqueline

Cabrera, Kevin**[246]***An Osteobiography of Tomb Op. 42, Ent. 5 from Copan, Honduras*

This research constructs an osteobiological narrative of two females and a male from Copan, Honduras, who were placed together within a Classic period (AD 600–822) tomb in the residential group Salamar (8L-10) Op. 42. Utilizing mortuary and isotopic data, this case study emphasizes aspects of personhood reflective of perceived sex, gender, and identity within the culturally diverse Copan society. Aspects of personhood, including gender roles, are embodied on the skeleton, enabling researchers to identify life history events and reconstruct daily practices. An osteobiographical approach best explores the personal journey of each individual by providing highly specific context reflecting individual social and environmental experiences. This case study examines the lives of these three individuals, hypothesizing how they became entangled in their death and how these stories fit into Copan society as a whole.

Cabrera Sáenz, Lina [158] see Torreggiani, Irene

Cabrero-Miret, Ferran**[62]***“Tola Boayacu Puyu” (Upper Pastaza, Ecuador) in the Understanding of the Amazonian Urbanism and Food Consumption*

In the last 50 years, from Amazonian archaeology there has been a remarkable and growing debate about the origin and dispersion of the cultures of the area, their carrying capacity, population number and density, political structure, and links with the adjacent geographical areas, as the Andes to its western border. More recently, carrying capacity and paleobotanical analysis have added complexity to interpretations, yielding unpublished data for the region. This report presents survey and excavation results from the site “Tola Boayacu Puyu,” located in the city of Puyo, Ecuador, and shows ceramics from the Regional Development period (500 BC–AD 500) to the Integration period (AD 500–1500). Analysis of carrying capacity and the biocultural remains are especially presented, including results in paleodiet and macronutrients showing an important variety of foods. Jointly with other archaeological sites in the Upper Pastaza (e.g., Río Chico, Té Zulay), “Tola Boayacu Puyu” is an example of a certain type of Amazonian urbanism and an opportunity to compare different settlement patterns nearby, like those of the Upano River.

Caceres, Miguel [158] see Lira, Nicolas

Cachini, Ronnie [88] see Huntley, Deborah

Cadena, Valentina [117] see Correa Gurrulat, Itaci

Caetano Andrade, Victor (Max Planck Institute of Geoanthropology) and Patrick Roberts (Max Planck Institute of Geoanthropology)**[303]***Finding a “Living Archaeology” among Tropical Trees: The Potential of Multidisciplinary Dendroarchaeology*

Tropical forests have often been synonymous with “wilderness” in popular discourse. However, the last couple of decades of research in archaeological, paleoecological and historical ecology have revealed that these ecosystems have actually been intensively managed by our species from at least 45,000 years ago. This necessitates reevaluation of traditional ecological and conservation approaches across the tropics. Here, we highlight how the key constituents of tropical forests, trees, can constitute a “living archaeology,” with their rings, growth patterns, and chemistry recording long-term human-environment interactions. Focusing on the

case study of pre- and postcolonial forest management in the Amazon Basin, we discuss how combined application of stable isotope analysis, dendrochronology, ancient plant genetics, and geographic information systems techniques are providing new insights into the lasting legacies of changing human land use and socioecological changes. We argue that this method holds much potential across the tropics and emphasizes the significance of tropical trees from the perspective of cultural as well as natural heritage.

Cagnato, Clarissa (Ca' Foscari University of Venice)

[12]

Chair

Cagnato, Clarissa (Ca' Foscari University of Venice), Nawa Sugiyama (University of California, Riverside), Laura Longo (Ca' Foscari University of Venice), Elena Longo (Elettra Sincrotrone Trieste) and Matteo Parisatto (Ca' Foscari University of Venice)

[12]

Reconstructing Ancient Mesoamerican Cuisine through Innovative Imaging Techniques of Amorphous Carbonized Objects

Archaeobotanists (paleoethnobotanists) often come across small, amorphous carbonized objects (ACO) in their flotation samples. However, identifying ACO's is often difficult, and as such, they mostly remain unidentified. New ways are therefore necessary to study these objects, which, we hypothesize are in some cases the remains of complex food preparations. One way is using nondestructive SR X-ray microtomography (μ CT), a key technique to consider for the imaging of archaeological materials. For the very first time, phase-contrast SR μ CT was applied to putative food remains from Mesoamerica and to experimentally prepared foods. In this paper we present the methods and preliminary results of the study of ACO's from Mesoamerican contexts. These data provide novel information on the ingredients used and the ways in which foods were prepared by Classic period (AD 250–900) populations living at Teotihuacan in Central Mexico but also in the Lowland Maya region.

Cagnato, Clarissa [12] see Longo, Laura

Cai, Shuhui [289] see Hendrickson, Mitch

Cail, Cheryl [303] see Dillian, Carolyn

Caine, Alyson (Dickinson College)

[211]

Individual and Collective Insights Lost through Commingling

Commingling of skeletal remains is largely acknowledged to occur in response to taphonomic factors in situ or secondary practices post-interment. However, data is frequently lost from commingling in museum collections due to curatorial practices. Here, commingling through curation and its ramifications are explored in an Egyptian legacy skeletal collection, Lisht. Skeletal remains from Lisht were excavated beginning in 1906 and, starting in 1908, were curated by the National Museum of Natural History. This skeletal collection represents one of the first collections Dr. Hrdlička curated as the Physical Anthropology curator and exemplifies the ramifications of commingling through his curatorial practices. A comparison between archival and osteological datasets from Lisht shows that while information is lost at the excavation and documentation stage of fieldwork, there is precipitous data loss at the curation stage. A minimum of 585 individuals were identified; however, postcranial elements were associated with only 51 individuals. During curation, skeletal elements were separated by bone type, removing the potential for analyzing distributions of an individual's features. These ramifications are compounded by the loss of associated mortuary contexts, for which 48% of tombs recovered with skeletal remains have lost skeletal data, further limiting narratives on mortuary experiences.

Cajigas, Rachel (University of Alabama)**[75]***The Agricultural Landscape at La Playa*

The La Playa site is a compelling example of large-scale anthropogenic modification within a landscape of change through deep time. The development of irrigation technology and agricultural intensification in the Sonoran Desert was deeply entwined with changing climatic and geomorphic conditions. As the largest identified Early Agricultural period site in the southwest United States/northwest Mexico, La Playa is a key case study in understanding the development of early agricultural technology in a dynamic region. At least 3 km² of the site is a vast agricultural landscape that includes earthen canals, field grids, and water diversion features constructed on the silty floodplain of the Boquillas River, all in various stages of destruction or threat of destruction due to rapid erosion of the relict floodplain. Following the end of the Early Agricultural period, geomorphically unstable conditions on the floodplain led to the abandonment of the irrigation system. Although there is no evidence of intensive agricultural practices after this time, people continue to occupy La Playa in the following centuries, creating new earthen canals and possibly reusing and expanding the ancient canals.

Cajigas, Rachel (University of Alabama)**[336]***Discussant*

Cajigas, Rachel [175] see Semon, Anna

Callaghan, Michael (University of Central Florida)**[122]***Chair***Callaghan, Michael (University of Central Florida) and Brigitte Kovacevich (University of Central Florida)****[122]***Ritual and Cultural Process in the E-Group Complex at Holtun, Guatemala*

In this paper we present data from investigations of Group F, or the E-group complex at Holtun, Guatemala. Named for the group at Uaxactun where this specific architectural compound was first identified, the Holtun E-group contains a large pyramidal structure to the west and a range structure to the east. First believed to be celestial observatories, E-groups are now known to have functioned in many ways involving gatherings of large groups of people, including agricultural and other rituals, possible markets, and royal ascension ceremonies. Here we combine various lines of evidence to show that E-group ritual activity reflected significant events in the history of Holtun, including its founding as a sacred site during the Middle Preclassic period, the possible establishment of kingship by the Late Preclassic period, warfare and abandonment at the close of the Terminal Preclassic period, and repopulation and renaissance during the Late Classic period. While the Holtun E-group demonstrates connection with a larger tradition of lowland Maya ritual practices, it also displays local innovation. This leads us to argue that the study of Maya E-groups must focus on differences as much as similarities, in an effort to reveal important regional cultural manifestations of larger interregional ritual practices.

Callaghan, Michael [122] see Batres, Kimberly

Callaghan, Michael [122] see Cardona, Karla

Callaghan, Michael [122] see Figueroa, Alejandro

Callaghan, Michael [122] see Kovacevich, Brigitte

Callaghan, Michael [276] see Tucker, Carrie

Callaghane, James [83] see Medina, Minneth

Callaway, Graham (College of William and Mary)**[303]***Patterns of Ecological Succession and the Archaeology of Living Trees*

Human activities have a strong influence on the species makeup of wooded landscapes. This means that the species present in a wooded area can be a useful line of evidence for understanding past land use. However, patterns of ecological succession are complex and influenced by many factors, including the types of plants and animals present, growing conditions, and ongoing human activities. This paper explores how wooded landscapes can be understood in terms of past successional patterns, visible to us through the living plants on the landscape. Most wooded areas can be productively understood as a co-creation of humans, other living things, and ecological conditions, and understanding these patterns can provide new insights about archaeological landscapes. A case study will be presented from Mecklenburg County, Virginia, USA.

Callaway, Taylor (College of William and Mary)**[325]***Chair***Callaway, Taylor (College of William and Mary)****[325]***The Afterlife of Feasts: Feasting and Ritualized Deposition in the Middle Woodland Tidewater*

In this paper, I consider the Middle Woodland period (500 BC–AD 900), a time in which forager-fishers moved across the central Atlantic seaboard in seasonal rounds, regularly returning to particular locales for large-scale feasting events. By analyzing the ceramic characteristics and feature distributions at a prominent Middle Woodland gathering place known as the Maycock's Point site, I discuss the ways ritualized deposition was integral to Algonquian commensalism. While feasting remains are often treated as simple byproducts of commensal events, the recent theoretical return to depositional practice allows us to reframe such deposits as purposefully curated assemblages with significance that far exceeds the feast itself.

Calongos Curotto, Manuel (University of Pittsburgh)**[193]***Chair***Calongos Curotto, Manuel (University of Pittsburgh)****[193]***Between Lunahuanas and Incas: Imperial Landscape in the Middle Cañete Valley, Peru*

The Cañete Valley was of great economic importance to the Inca Empire. The presence of sites like Huacones/Vilcahuasi in the lower section of the valley or Incahuasi in the middle section, both of them having various sets of storage facilities, shows the significance of the intensive agricultural production of the valley. However, we still do not understand how local communities accepted and/or negotiated Inca presence in their homeland. This presentation focuses on how different features on the territory were used or built to create an imperial landscape in which local identities and practices were contested with imposed Inca practices in the middle section of the Cañete Valley. I will present data about three different types of settlements: cemeteries, shrines, and control stations. In the first two types of settlements, we have cases in which different traditions merge in the same place, while in others, there is a clear differentiation between them. Control stations along the Inca Road, which usually present walls, function as a way to control the movement of people, but also as possible boundaries among different types of territories. I proposed these settlements were essential elements in the strategies of control of the Inca Empire.

Calvert, Caitlin [94] see Farmer, Reid

Calvo Trias, Manuel (University of Balearic Islands)**[18]**

About Islands and Islanders: Mobility, Connectivity, and Identity in the Balearic Islands (Mediterranean Sea) during the Bronze Age

During the Bronze Age, the archaeological record of the Balearic Islands in the Mediterranean Sea reveals a conspicuous prevalence of similarities across all the islands within the archipelago. To elucidate the mechanisms underlying this convergence phenomenon within the archaeological record, we developed a study centered on the analysis of mobility and connectivity dynamics. This project generated an expansive theoretical, methodological, and analytical framework. This framework encompassed a diverse array of methodologies, including the examination of ceramic production through archaeometry and technological assessments, investigations into metal production, isotopic analyses, and the application of isotopic techniques to analyze the mobility patterns of domesticated animals. Furthermore, we conducted a study of maritime seafaring strategies between the islands employing geographic information systems (GIS) analysis, coupled with an examination of meteorological maritime conditions. Through the compilation and analysis of these datasets, we have garnered valuable information about the mobility and connectivity strategies employed by the Bronze Age island societies of the Balearic Islands. Additionally, our research has afforded us the opportunity to think how these dynamic processes actively contribute to the configuration of identity among island communities, both on individual islands and across the entirety of the archipelago.

Camara, Guadalupe [83] see Hernandez, Hector

Camara, Maria Encarnacion [152] see Chavez, Rene

Cameron, Asa (Yale University)**[23]***Chair***Cameron, Asa (Yale University), Christina Carolus (Yale University) and Bukhchuluun Dashzeveg (Yale University)****[23]**

Mobility, Foodways, and Ancient Statecraft in the Gobi-Steppe of Mongolia

From the appearance of monumental traditions in the Late Bronze Age (ca. 1500–1000 BC) through the emergence of the Xiongnu state (ca. 250 BC–AD 150), populations of the semiarid Gobi-steppe of Mongolia underwent a series of dramatic transitions. These changing dynamics altered how people interacted with and moved within the landscape, transformed subsistence and habitation practices, and spurred the development of inter- and intraregional political complexity. Investigation of shifting mobility patterns and foodways provides concomitant throughlines for these transitions, linking local and regional changes in community-level organization to better understand the position of Gobi-steppe populations in the rise of the first nomadic state in eastern Eurasia. This paper integrates several lines of novel biomolecular evidence (stable and radiogenic isotopes, lipid residue analysis, proteomics) from the Gobi-steppe of southeastern Mongolia to chart diachronic changes in human and livestock movement and subsistence during the Late Bronze Age, the Early Iron Age (ca. 1000–400 BC), and the Xiongnu period. These data are discussed in relation to what is currently known about the development of cultural and political complexity in Mongolia, with specific focus on what regional changes in mobility and foodways can tell us about the formation and structure of the broader Xiongnu state.

Cameron, Asa [256] see Carolus, Christina

Cameron, Claire [115] see Southorn, Megan

Camino, Byron (INVACMA)**[220]***Fase Quilca: Nuevos aportes para el conocimiento cronológico del Sector de Yachay, Sector de Urcuquí, Provincia de Imbabura, Ecuador*

Los estudios arqueológicos realizados a lo largo de 7 años en La Ciudad del Conocimiento “Yachay”, permitieron reinterpretar y redefinir a los realizados por Jijón y Caamaño (1914, 1920) y Porras (1987), quienes identificaron una ocupación que se desarrolló en el sector y que se la conoció de forma parcial. Entre las evidencias se registró una extensa y compleja colección de artefactos culturales y varios remanentes arquitectónicos. Los objetos corresponden a una variedad de ollas, cuencos, compoteras cerámicas; bloques de rocas empleados como elementos simbólicos, manos de moler, ganchos de propulsores, cuentas pequeñas y tubular de piedra; espátulas de hueso; valvas de conchas, caracoles marinos; algunos metálicos; identificación de especies vegetales contenidas en los suelos; a más de una caracterización de remanentes arquitectónicos de “superficie” (tolas, pirámide, pucarás, restos de campo agrícola) y de “subsuelo” (tumbas de pozo y espacios rituales); mismas que permitieron inferir sobre modelos de vida de la gente que habitó esta región del septentrión andino del Ecuador, en el Periodo de Desarrollo Regional.

Camp, Stacey (Michigan State University)**[65]***Discussant***Camp, Stacey (Michigan State University), Ben Akey (Michigan State University), Levi Webb (Michigan State University) and E. W. Duane Quates (USDA)****[283]***Uncovering the Foundations (Literally) of Higher Education in Michigan: The Discovery of Michigan State University's First Campus Observatory*

In May 2023, Michigan State University (MSU) construction workers installing hammock poles hit what they believed was a foundation or rock. They immediately contacted MSU's Campus Archaeology Program (CAP), directed by Dr. Stacey Camp. Ben Akey, the campus archaeologist at the time, examined historic maps and aerials, which revealed that the first observatory on campus was once in that location. The Campus Archaeology Program staff then conducted shovel test pits, which appeared to confirm the presence of part of the observatory's foundation. Additional research, which included two 1 x 1 m excavation units and a ground-penetrating radar survey, revealed that nearly all of the building's foundation is intact. Our poster will share the preliminary findings as well as press releases and plans for future work at the site.

Campaña Valenzuela, Luz Evelia [320] see López Camacho, Javier

Campaña Valenzuela, Luz Evelia [32] see Tsukamoto, Kenichiro

Campbell, Mel [98] see Wai, Stefanie

Campbell, Renae [184] see Warner, Mark

Campbell, Rod (Institute for the Study of the Ancient World, NYU)**[56]***A Commons Approach to Violence and Inequity: Public Goods, Enchaining, and the Reconstitution of the Shang Kingdom under Wu Ding*

In Chinese archaeology the question of how large-scale political collectives came into being is usually understood under the rubric of “state formation.” In addition to the issue of the potential reification of an anachronism in the state concept, early complex polities are generally imagined in terms of political and

economic centralization with the focus on first occurrences. The implicit assumption is that once “states” have formed, a new era has dawned and the rest is just politics. This perspective tends to obscure the fact that every polity is both a novel experiment and a continuation of historical precedent and that inflection points and structure changing events occur at multiple scales and temporalities. I will focus on the Shang kingdom centered at Anyang during the reign of king Wu Ding (ca. 1250–1200 BCE). I will analyze Wu Ding’s institutional innovations as a set of solutions to the problem of establishing and maintaining a hierarchical political community against a backdrop of diverse elite and non-elite interests. It will be argued that a commons perspective enables an understanding of how prestige practices were re-coded as public goods allowing both for their expansion and redeployment in the service of enhanced inequity.

Campbell, Rose [174] see Foran, Debra

Campbell, Wade (Boston University)

[301]

Building Back Past Diné Communities: Ricos, Pobres, and Naat’aanii Status in Pericolonial New Mexico

In the mid-1900s, American anthropologists characterized Diné society as a four-tiered social organizational structure with “natural communities” at the highest level. Often referred to as regional “bands,” these geographically defined, economically self-sufficient, multifamily social entities were loosely organized under the nominal leadership of local *naat’aanii* (“headmen”). The unifying structure of these otherwise dispersed communities would have been shaped by repeated marriages among localized lineages that in turn served to structure traditional farming and herding-focused land use practices mediated by traditional *k’ée* kinship ties (i.e., *k’ée*). This concept has been most thoroughly developed in the intensively pastoral context of Reservation-era Diné society (AD 1860–present; Kelley and Francis 2019); however, questions abound regarding the structure of Diné land tenure in earlier centuries. In the spirit of improving our knowledge about early Diné social organization, this paper endeavors to extend the tenets of the *k’ée* system into the seventeenth and eighteenth centuries, where Spanish records hint at the enigmatic sociopolitical and economic roles of Diné “capitanes” on the colonial New Mexican frontier. How can a Diné-focused archaeology help us to better understand Diné organizational logics in a world where numerous changes, including widespread fortress building and apparent pastoral growth, were well under way?

Campos, Alfredo [42] see Mayo, Carlos

Campos Díaz, Lyla Patricia (University of Calgary)

[226]

The Importance of Different Ontologies for Heritage Conservation in the Maya Area

Heritage conservation has as one of its main objectives the recovery of specific values defined on many occasions by restorers and trained professionals. However, these values might not be the same for everyone. How can restorers incorporate the different ontologies regarding heritage in their conservation treatments and policies? Through a case study of a Maya indigenous community in the state of Chiapas, the meanings and values of two different kinds of heritage are studied. The community of Francisco Sarabia worships on the one hand, a Catholic canvas painting from the eighteenth century depicting the “Virgen Corazón de María”; on the other hand, the Postclassic archaeological site of Tenam Puente gets intertwined with the Catholic religion and their Maya cosmivision, playing a relevant role in the agricultural cycle, being the Acropolis of the archaeological site the destination of a pilgrimage carried out once a year by the community to honor the “Virgen.” Through an ethnographic approach, the different ontologies related to this patrimony are unveiled, serving as a starting point to better understand the role of the restoration processes and the possibility of creating more inclusive conservation policies.

Campos-Hernandez, Cinthia (Binghamton University)**[256]***A Comparative Analysis of Trincheras Tradition and Hohokam Subsistence Practices from ~400 to 1450 CE*

For nearly a century, archaeologists have debated the subsistence adaptation of the Trincheras Tradition of Sonora, México. Nineteenth-century scholars hypothesized that they were foragers until the arrival of the Hohokam around 1300 CE. Having recently excavated Snaketown in the Phoenix basin, archaeologists had characterized the Hohokam by their extensive crop irrigation canals along the Salt and Gila Rivers. After failing to observe similar features to those of the Phoenix basin Hohokam, the Trincheras were interpreted as bands of “desert Hohokam” who had adapted to the marginal environment as hunters and gatherers. Although archaeologists often generalize the Hohokam as a whole, research has revealed micro-traditions that share similarities and differences in settlement and subsistence patterns. Nineteenth-century archaeologists referenced the Papaguerían Hohokam, whose southernmost extension is the town of Caborca, east of the Magdalena Valley, part of the Trincheras’ heartland. Recent research has allowed us to reevaluate and test these early hypotheses regarding regional subsistence adaptations and micro-traditions. This study presents archaeological and macrobotanical results from all excavated Trincheras sites to compare their subsistence patterns to that of the three Hohokam micro-traditions through time. This study challenges the notion of Hohokam and Trincheras as monolithic and contrasting neighboring cultures.

Campos Martinez, Miriam (UC Merced)**[114]***Chair***Campos Martinez, Miriam (UC Merced), Manuel Duenas-Garcia (UC Merced) and Guillermo Aguilar Martinez (Universidad de Guanajuato)****[114]***Chemical Analyses and Activity Areas at Cerro de en Medio: A Multidisciplinary Approach*

This interdisciplinary archaeological study centers on Cerro de en Medio (CDEM), an ancient site in the northern reaches of Mesoamerica during the late Classic period (600–900 CE). Advanced chemical analyses of occupation floors provide insights into CDEM’s activities, revealing its intricate social dynamics. The research combines this chemical analysis with artifact examination and architectural layout studies, fostering a comprehensive understanding of enduring activities at CDEM. CDEM is located in Aguascalientes, in the central-northern region of the country, atop a 2,100 m (6,890-foot) hill. It is encircled by rhyolite ravines and horizontal tuff layers. The rocks’ erosion resistance shaped the stepped hill landscape, influencing the daily lives of ancient inhabitants by providing essential lithic raw materials and impacting tool-making practices. Our study identifies distinct activity areas in CDEM: lithic tool production (including arrow points and scrapers), storage, and service ceramics. Chemical floor analysis delineates specific areas—food preparation, consumption, storage facilities, and a dedicated nixtamal preparation area. This understanding is vital in an area where agriculture is challenging. CDEM’s households provide insight into subsistence strategies complemented by the site’s unique characteristics.

Campos Martinez, Miriam [197] see Cobb, Emilie

Campos Quintero, Lina (Archaeologist of the Gold Museum), Luis Carlos Choperena-Tous (Independent Archaeologist), Julián Gamboa-Mendoza (Sacyr), Marcos Martín-Torres (University of Cambridge) and Agnese Benzonelli (University of Cambridge)**[118]***Changing and Exchanging Social Values of Metals: The Integration of Tumbaga and Iron Objects in Indigenous Graves in the Colombia’s Caribbean Region*

Although the colonial order between the sixteenth and eighteenth centuries transformed the use and trading of metal objects employed in indigenous funerary practices in Colombia’s Caribbean region, it also enabled local goldwork traditions to continue. Particularly, in the lower-Magdalena River region, the “Malibú” buried

their dead with typical tumbaga objects from a long-lasting regional tradition, along with iron tools traded and worked by either Spanish or African enslaved people. Here, I suggest how, even though the colonial institutions tried to reduce the mobility of indigenous people by making villages and encomiendas, the great mobility of the “Malibú” along the river could have had an impact on the intraregional trading networks for metallic objects. Stylistic and compositional analyses of tumbaga and iron objects at two archaeological sites, San Felipe and La Pasión, enabled the coexistence and integration of metal technologies of different origins to be described. On the one hand, performing chemical analyses of the tumbaga objects allowed the lost-wax casting and depletion gilding techniques, which indigenous goldsmiths before the Spanish conquest were experts at, to be characterized. On the other, stylistic and compositional analyses of iron provide a first chemical approach in Colombia to suggest origins of the metal.

Cannon, Kenneth (Cannon Heritage Consultants)

[231]

Chair

Cannon, Kenneth (Cannon Heritage Consultants) and Ronald James (Twin Falls Historic Preservation Commission)

[231]

Chinese Mining in the Snake River Canyon of Southern Idaho

In the autumn of 1870 Euro-American miners in the Snake River Canyon lifted their prohibition of “Chinese emigration” enacted the previous May at the Shoshone Falls. Historic accounts suggest the easily accessible river bar deposits were playing out, and as one miner noted, “The Chinese are better adapted to this sort of mining.” While most Chinese initially worked as laborers, claims were eventually being “bargained and sold.” One claim in particular was transferred from Relf Bledsoe to Ah Mon Mong and Tung Tock Tong in November 1871. The influx of Chinese during this time coincided with the completion of the Transcontinental Railroad. In the fall of 2023, Cannon Heritage Consultants received a grant from the Twin Falls Historic Preservation Commission to begin survey work in the Canyon toward developing a National Register District Nomination. This paper will discuss the results of the initial phase of the survey in the context of the Chinese diaspora.

Cannon, Molly and Anna Cohen (Utah State University)

[275]

Adaptive Water Management in the American West: Utah Case Studies in Technological Innovations and Community Cooperation

The western United States has experienced dramatic population growth for the past century and a half and fluctuating water resources even longer. For example, there is increasing evidence that people began diverting water from Utah’s streams and rivers during the Fremont period (ca. AD 1–1300). As early as 2,000 years ago, the Ancestral Puebloans did the same in central and southern Utah. Research within the broader Four Corners Region shows that the introduction of maize agriculture was accompanied by various irrigation techniques at least 3,000 years ago. Still, also that variable water resources impacted settlement patterns and migration for centuries. Though few historical or archaeological studies of Utah’s water management, the evidence suggests that residents have long harvested water, developed adaptive water management strategies, and created technological innovations to ensure access to water sources. Drawing on case studies that preserve past irrigation systems, we examine the changing use and construction of water infrastructure over time that inform on community-water dynamics. Within this comparative approach, we identify salient components of ancient and historic water infrastructures that enabled sustainable water management in arid regions.

Cantin, Nadia [240] see Alloteau, Fanny

Canuto, Marcello (M.A.R.I./Tulane University), Tomas Barrientos (Universidad del Valle de Guatemala), Francisco Saravia (Universidad de San Carlos de Guatemala), Alejandra Gonzalez (Universidad del Valle de Guatemala) and Jocelyne Ponce (Tulane University)
[159]

Before the Aurora of Hegemony: How the La Corona Community Brooked the Kaanul Dynasty

By examining archaeological and epigraphic evidence from the northwestern Petén during the Classic period, we can gain valuable insights into the strategies used by the Kaanul dynasts to establish and maintain a unique regional hegemony in the Maya Lowlands. We focus on the site of La Corona where we have integrated archaeological and epigraphic data to examine the significance of the early rulers in this particular geographical area. Looking at architectural construction, ceramic affiliation, epigraphy, and settlement, we investigate the changes in the nature and organization of the La Corona community in the AD fifth and sixth centuries. Based on the available data, we suggest that the northwestern Petén region held significant strategic importance, serving as a crucial location for both the initial expansion of the Kaanul dynasty in the early AD sixth century and the subsequent transformation and maintenance of its dominant control during the AD seventh and eighth centuries. We, therefore, aim to model in what ways the changes in the Kaanul dynasty regime impacted this community and set it on the course to become its long-standing subordinate ally.

Canuto, Marcello (M.A.R.I./Tulane University)
[292]

Moderator

Canuto, Marcello [276] see Khaghani, Victoria

Cap, Bernadette (San Antonio Museum of Art)
[213]

Discussant

Cap, Bernadette [251] see Yaeger, Jason

Capps, Matthew (University of Pennsylvania)
[175]

Finding the Everyday: Coles Creek Non-Mound Spaces in the Natchez Bluffs

There has been a long-standing interest in the Coles Creek (AD 700–1000) mound centers of the Natchez Bluffs region in the Lower Mississippi Valley (LMV), however, work focused on non-mound spaces is lacking. Few Coles Creek structures that are unassociated with mounds have been excavated, which makes answering questions about everyday life and settlement patterns difficult. Over the summer of 2023, I conducted archival work and preliminary survey to locate previously recorded non-mound Coles Creek sites in the Natchez Bluffs. Here, I present results from this work and propose a methodology for future survey and analysis to identify additional non-mound spaces and everyday activities carried out within those spaces. This study will provide a better understanding of the daily lived experiences of Coles Creek peoples outside of monumental mound centers and the role of the home in the Natchez Bluffs landscape.

Capriati, Agustin [289] see Utting, Benjamin

Capriles, José (Pennsylvania State University), Velia Mendoza España, Daniela Velasco Arzabe and Christophe Delaere
[158]

Exploring the Underwater Zooarchaeological Record of Lake Titicaca

Lake Titicaca is one of the centers of early cultural development in the ancient Andes. Because of its sensitivity to climate change, the surface of the lake has fluctuated considerably over time, which in turn has influenced the development of ecological systems and cultural development. This paper focuses on the archaeofaunal remains recovered in the context of recent underwater archaeological explorations in Lake Titicaca. Specifically, we describe and compare the zooarchaeological assemblages of two sites, Ojjelaya and Khoa. Ojjelaya was a residential village inhabited during the Late Formative period (400–500 CE) and likely abandoned due to flooding. Khoa was an offering shrine during Tiwanaku (800–1000 CE) times. The faunal remains from Ojjelaya comprise heavily fragmented and incomplete camelid remains, confirming they were deposited as a result of domestic activities. In contrast, the faunal assemblage of Khoa consists of mostly complete elements of juvenile llamas, likely sacrificed in situ. At both sites, an abundance of fish and frog remains as well as additional indicators suggest a taphonomic background dominated by aquatic taxa and verifies that both ecological processes and human behavior contributed to the formation of the complex zooarchaeological record preserved in Lake Titicaca.

Capriles, José [217] see Hastorf, Christine

Capriles, José [306] see Hu, Di

Capuder, Karen (Confederated Tribes of the Colville Reservation)

[87]

Discussant

Capuder, Karen (Confederated Tribes of the Colville Reservation)

[87]

“We Used to Always Burn That”: Anthropogenic Fire Regimes and Cultural Resilience at túl'mən'

On September 7, 2020, the Cold Springs Fire ignited on the Colville Indian Reservation during a significant wind event, with flames racing southward 50 miles overnight, crossing the Columbia River and igniting the Pearl Hill Fire. These fires eventually charred a combined 413,673 acres, including some of the last vestiges of Washington's fragile shrub steppe ecosystem. Not unexpectedly, the obliteration of both invasive and disproportionately dense stands of native vegetation allowed the return of countless plant species of cultural significance to the Moses Columbia Tribe and the Confederated Tribes of the Colville Reservation of whom they are a member. The subsequent resurgence of subsistence gathering within, and the recollection of ancestral anthropogenic burning practices and teachings specific to, this area speak to the regenerative qualities of fire in landscapes long managed through its controlled use. As climate change related wildfire events become more frequent and more devastating, the recovery of knowledge related to the management of the shrub steppe through the anthropogenic use of fire becomes ever more critical. How might archaeological and historical inquiry support Indigenous efforts to reinstitute anthropogenic burning regimes in support of cultural resurgence and ecosystem resilience?

Capulli, Massimo [29] see Willis, Staci

Carabias, Diego [77] see Urbina, Simón

Caramanica, Ari

[1]

Discussant

Caramanica, Ari

[132]

A Failure of Imagination: North Coast Peruvian Irrigation under Spanish Colonial Rule

Ethnohistoric documents describe the north coast as a verdant, irrigated landscape at the time of Spanish conquest; yet, only a few decades later, colonial archives are filled with legal disputes over water rights, water shortages, and the desertification of farmland. Cataclysmic demographic collapse caused by the introduction of European diseases accounts for some system degradation in those early years. However, archaeological and ethnohistoric evidence suggests that a failure of imagination might also be to blame. Failure is defined as a mismatch between intended outcome and actual outcome, and it often occurs due to a misunderstanding of the nature of the problem being addressed. This paper argues that a fundamental misreading of the north coast environment underlies the many “small-f” failures that plagued the Spanish colonial farming system (many of which persist, even today). It presents three examples that exemplify this misreading: (1) a prehispanic canal “designed to fail,” (2) a prehispanic dam feature designed to leak, and (3) a twentieth-century account of a canal branch designed to be flooded. These cases demonstrate that prehispanic and autochthonous, modern-era water management infrastructure targeted elements of the north coast environment ignored or misunderstood by colonial farmers.

Carballo, David (Boston University), Daniela Hernández Sariñana (Universidad Nacional Autónoma de México), Agustín Ortiz (Universidad Nacional Autónoma de México) and Jorge Blancas (Universidad Nacional Autónoma de México)

[218]

Interdisciplinary Investigations in Teotihuacan’s Tlajinga District: Disentangling Public and Private Uses of Space

Since the project’s beginnings in 2012, Luis Barba has been a codirector of the Proyecto Arqueológico Tlajinga Teotihuacan (PATT), helping to bring an interdisciplinary research program to studying neighborhood organization and domestic life on the southern periphery of this early Mexican metropolis. After first investigating apartment compounds and the southern extension of the Street of the Dead, the project has recently focused on understanding the construction history and uses of elevated platform complexes in Tlajinga’s southern neighborhood center. Compared with the apartment compounds of the district, these complexes were more elaborately made and decorated. Their larger courtyards and patios served some ceremonial functions but the complexes may have also served as residences for intermediate elites. Elucidating the nature of more public versus more private activities in the complexes requires interdisciplinary research combining excavation and artifact analysis with geophysical prospection and floor and artifact chemistry.

Carbaugh, Aimée (University of Illinois, Urbana-Champaign)

[143]

Moderator

[143]

Discussant

Carbaugh, Aimée (University of Illinois, Urbana-Champaign), Krystiana Krupa (University of Illinois, Urbana-Champaign) and Eve Hargrave (University of Illinois, Urbana-Champaign)

[300]

What Happens in the Ivory Tower: The Academic Trade of Archaeological Human Remains

While much of the recent discussion around the trafficking and illicit trade of human remains focuses on the black market and sales utilizing sites such as eBay or various social media platforms, we examine the historical practice of sending (or trading) human remains within academia. Historically, scholars from academic institutions throughout North America were well known for moving partial or complete collections of human remains between institutions for use in comparative collections or to facilitate specialized analyses. Such trades or loans were often based on what are widely described as “handshake agreements,” where no paperwork exists to document these transfers. Through this “sharing of resources,” human remains were often separated from important contextual information, as well as associated cultural materials and human remains. In this paper, we describe the historical practice of undocumented collections transfers between faculty and institutions and explore the ethical ramifications, including complications for curation, research, and repatriation.

Carbaugh, Aimée [72] see Hargrave, Eve

Carbonell, Curt (Vancouver Island University), Marie Hopwood (Vancouver Island University) and Laura Carbonell (Wayward Distillery)
[294]

Bappir: The Ancient Mesopotamian Brewer's Best Friend

Bappir (Sumerian: “beer bread”) was a ubiquitous ingredient in ancient Mesopotamian beer brewing for millennia. However, little is known about exactly what *bappir* was or how it was used. Nevertheless, the scant evidence available from contemporary texts, such as the second-millennium BCE “Hymn to Ninkasi,” have led some researchers to interpret *bappir* as a dried sourdough loaf. Unknowingly or otherwise, ancient brewers used these loaves to inoculate their brews with the *Saccharomyces cerevisiae* (yeast) cells necessary for fermentation. Previous experimental archaeology has proved the plausibility of this interpretation, as carefully baked sourdough loaves can retain sufficient viable yeast cells to function as a starter for beer brewing. No data exists, however, on the “shelf-life” of *bappir*. To address this, experimental archaeology was employed to investigate the viability of yeast cells for beer production during prolonged dry storage in *bappir* loaves. *Bappir* loaves were prepared and stored for six months (26 weeks), with samples taken each week to test the yeast cell viability (survivability) and vitality (healthy activity). Understanding how long *bappir* can be stored while remaining viable for beer production can reveal insight into the frequency with which household brewers, typically women, were required to make these loaves.

Carbonell, Laura [294] see Carbonell, Curt

Cárdenas Soto, Martín [252] see Pacheco Arias, Leobardo

Cardoen, Wim [107] see Wilson, Kurt

Cardona, Karla and Michael Callaghan (University of Central Florida)
[122]

Ceramics and Social Process at Holtun, Guatemala

In this paper we present data from 13 years of pottery research at the Maya site of Holtun, Guatemala. Using results from type: variety classification, attribute studies of paste and form, and chemical composition analysis, we outline the sequence at Holtun and relate it to important events in the history of the site and region. Beginning with the site’s founding in the early Middle Preclassic period we identify signs of incipient specialization of Mamom sphere wares, as well as long-distance exchange of Mars Orange Paste Ware. This robust ceramic economy flourishes in the Late and Terminal Preclassic periods, but abruptly ceases when the site experiences a collapse in the Early Classic period. The collapse does not last, and the ceramic economy experiences a second and final florescence in the Late Classic period marked by types and forms of the Tepeu sphere made from local, yet distinct, paste recipes in comparison to the Preclassic period. We conclude that the pottery sequence at Holtun reflects important local innovation of regional trends, as well as engagement and estrangement from interregional sociopolitical processes.

Cardona, Karla [122] see Kovacevich, Brigitte

Carlson, Kristen [33] see Bamforth, Douglas
Carlson, Kristen [265] see Williams, Makayla

Carmody, Lydia [268] see Carmody, Stephen

Carmody, Stephen (Troy University), Lydia Carmody (Troy University Archaeological Research Center), Simonetta Menchelli (University of Pisa), Ellie Shields (Troy University) and Madisen James (Troy University)

[268]

Zooarchaeological Remains from the Roman Harbor Vada Volaterrana

The ancient Roman harbor of Vada Volaterrana was supported by a network of structures immediately surrounding the port at Vada's San Gaetano site. A 2015 GPR survey identified a series of rectangular buildings of unknown purpose in the southern sector of this site whose subsequent excavation produced several botanical and faunal remains. In 2019, a collaborative project between the University of Pisa and Troy University was initiated to address cultural activity at San Gaetano's buildings I, L, and M using these assemblages. This poster presents data and interpretations from Vada's 2017 to 2022 bone and shell samples. Paired with architectural, artifactual, and botanical data, our zooarchaeological results help uncover shifts in both subsistence patterns and cultural enterprises at this building complex.

Carney, Molly (Oregon State University)

[87]

Chair

Carney, Molly (Oregon State University), Naomi Scher (Far Western Anthropological Group) and Shannon Tushingham (California Academy of Science)

[87]

Five Thousand Years of Kalispel Food Security: A Multiproxy Approach to Food Processing, Preference, and Access in the Past

Food security is fundamental to strong, resilient food systems, and healthy communities. It exists when all people have consistent access to nutritious and culturally appropriate foods, gathered and distributed in socially acceptable ways. Archaeology offers a means of documenting and understanding deep time histories and legacies of food security, highlighting millennia of subsistence solutions across climatic and social conditions. In this paper, we explore the archaeology of food security and resilience of the Pend Orielle Valley of the Northwest plateau, in partnership with the Kalispel Tribe. We thoughtfully examine interdisciplinary approaches to food security, justice, and sovereignty before examining the archaeological record of plant food availability, access, preference, and sustainability over the last 5,000 years. We specifically look to macrobotanical, geoarchaeological, and fire-cracked rock data lines from communal food processing and consumption features within nine sites located in ancestral Kalispel lands. As we continue to work together, we share these records of food security and provisioning with the Tribe so they can continue to define their own contemporary food system that honors and acknowledges these culinary traditions and histories of resilience.

Carney, Molly [87] see Jacobs, Nicholas

Carolus, Christina (Yale University)

[23]

Chair

Carolus, Christina (Yale University), Asa Cameron (Yale University), Amartuvshin Chunag (National University of Mongolia), Joshua Wright (University of Aberdeen) and William Honeychurch (Yale University)

[256]

Sowing the Seeds of Empire: Early Statecraft and the Emergence of Indigenous Agriculture on the Mongolian Steppe (ca. 250 BC–AD 150)

The end of the first millennium BC (ca. 250 BC–AD 150) marks the genesis of Xiongnu, eastern Eurasia’s first nomadic state, which emerged from central Mongolia to successfully integrate one of the largest-scale political configurations in prehistory. This transformative period also marks the appearance of Mongolia’s earliest direct agricultural evidence. Though long assumed to be a “purely pastoral” state, scholars have recently considered connections between these phenomena. Growing evidence suggests a political culture that may have deployed novel foodways in statecraft; namely, the development of flexible indigenous agropastoral systems that integrated or intensified production of foreign cereals. Evaluation of this perspective, however, has been hindered by a historical lack of systematic archaeobotanical analysis. Here we present an overview of current evidence for eastern steppe populations’ relationships to agricultural practices and products during the first millennium BC. We then report results of the first and earliest formal macrobotanical and isotopic analyses ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$, $^{87}\text{Sr}/^{86}\text{Sr}$) of a set of locally produced crop assemblages from Iron Age northern Mongolia, including the earliest direct evidence for the presence of oats and broomcorn millet. Results are drawn together to situate agricultural trajectories in the Mongolian steppe within the broader prehistory of the trans-Eurasian crop exchange.

Carolus, Christina [23] see Cameron, Asa

Carpenter, John (Centro INAH Sonora)

[75]

Chair

Carpenter, John (Centro INAH Sonora), Elisa Villalpando (Centro INAH Sonora) and James Watson (University of Arizona)

[75]

Shall We Gather at the River: 13,000 Years of Adaptation in the Sonoran Desert at La Playa (SON F:10:3)

Our research at the extraordinary La Playa Site (SON F:10:3) is now entering its twenty-third year. This site is located at the Boquillas Valley about 10 km north of Estación Trincheras and some 27 km west of Santa Ana, Sonora. The La Playa site presents an archaeological landscape revealing evidence of continuous human use since the Paleoindian period (ca. 13,000 years ago). Its most intensive use was during the Early Agricultural period (3700–2050 cal BP or 2100–150 CE); after this period, the occupation of the Boquillas Valley greatly diminished, but the site was continuously occupied by the Trincheras tradition people, Piman groups, French goat herders, and even a hotel and restaurant was in operation there during the 1950s. Countless thousands of *hornos* (roasting features), several hundred human inhumation and cremation burials, numerous dog burials, shell ornament production and lithic reduction activity areas, caches of manos and tabular “lap stone” slabs, and a schist quarry are the predominant features associated with the Early Agricultural period. This lecture presents a cultural-historical account of the *longue durée* of these human occupations and their varied adaptations represented in the archaeological record.

Carpenter, John [75] see Martínez-Tagüña, Natalia

Carpenter, John [75] see Pales, Matthew

Carpenter, John [75] see Sanchez Miranda, Guadalupe

Carpio, Edgar (Universidad de San Carlos) and Anahí Solares (Universidad de San Carlos)

[114]

The Obsidian Artifacts of Uaxactun

The results of the typological analysis of the sample of the collection of obsidian artifacts from the Uaxactun site for the 2010 to 2019 seasons are presented, highlighting the importance of this imported material to the inhabitants of the site, the variety of artifacts, and their possible uses.

Carr, Andrew [225] see Stewart, Brian

Carr, Christopher (University of Cincinnati), Nicolaus Seefeld (University of Bonn), Nicholas Dunning (University of Cincinnati) and Shane Montgomery (University of Calgary)

[31]

Exploring the Function and Evolution of Intensive Stream Modifications in the Southern Escarpment of Calakmul
Investigations over the past decades have shown that the Classic Maya conducted monumental landscape modifications in order to both avoid inundations of settlement areas and to capture and store rainfall. In the initial stages, these modifications involved the sealing of reservoirs, which maximized the amount of stored water. In situations of increasing demographic pressure, the Maya also increased the catchment areas of their reservoirs by sealing the surrounding areas and the construction of influx canals. Frequently, these public building programs involved the modifications of larger landscape areas, including the alteration of natural seasonal streambeds. In our contribution, we present the results of our recent investigations within the PABAL project, realized in three streams located in the southern escarpment of Calakmul (Arroyos 5 and 6 and Arroyo Zapote). The features documented in these drainages revealed sophisticated solutions of hydraulic engineering indicating a highly integrated modification of the settlement landscape, which both protected and created cultivation areas, and prevented the loss of surface runoff into the adjacent bajo areas. Our contribution will explore the function and evolution of these landscape alterations in the specific case of Calakmul, and in comparison with other Lowland Maya sites.

Carr, Christopher [31] see Anaya Hernández, Armando

Carr, Christopher [31] see Brewer, Jeffrey

Carr, Christopher [31] see Dunning, Nicholas

Carr, Christopher [31] see Meyers, Stephanie

Carr, Philip (University of South Alabama)

[10]

Discussant

Carr, Philip (University of South Alabama)

[219]

Thirty-Eight Years a Mentor: Bob Kelly's Steady Guidance, Abundant Kindness, and Thoughtful Insights
Bob came to the University of Louisville in my third year, and literally changed the Anthropology Department and my life. Coursework, field school, directed studies, and senior thesis, taught and/or guided by Bob, propelled me to graduate school. Consistent conversations over time and specific guidance at the 1991 SAA in NOLA led to chairing a session entitled "The Organization of Stone Tool Technologies" for which Bob served as discussant. Excavations at Mustang Rockshelter, career advice, more mentoring, and all the while reading and rereading Bob's publications, and today, using *The Fifth Beginning* as the textbook for AN 101. Thanks Bob!

Carr, Philip [253] see Miller, D. Shane

Carr, Sorayya [244] see Robinson, Eugenia

Carrasco, David (Harvard University)

[79]

Discussant

Carrasco, Michael (Florida State University)

[128]

All that Sprouts Is Not Maize: Phytogenic Imagery in Mesoamerican Art and Narrative
Interpretations of sprouting imagery and phytomorphic deities in Mesoamerican iconography have often

turned to maize. Although maize informs Maya art and is personified as the Maya Maize God, imagery from elsewhere in Mesoamerica is often less specific and draws from a variety of sources to construct its deities visually. This fact complicates explanations that posit a direct correspondence between maize and specific deities. A review of the iconographic, archaeological, ethnographic, and ethnobotanical sources demonstrate that cycads, aroids, palms, and various trees, among other plants and animals contributed to the symbolism of Mesoamerican fertility deities and ecological representations. By bringing these lines of information together this paper suggests that such imagery, rather than being representations of specific taxa often depicted systems or ecologies. Therefore, this paper counters studies that assume a one-to-one iconic or isomorphic relationship between the image and its referent. This assumption fails to account for the processes that these hybrid depictions often imply, leaving emic categories underexplored. From this perspective a system for analyzing Indigenous ecological knowledge through the art historical record is elaborated with a specific focus on sprouting, growth, and transformation.

Carrer, Francesco (Newcastle University), Isaac Ullah (San Diego State University), Diego Angelucci (University of Trento) and Guillem Domingo Ribas (Newcastle University)
[151]

Pastoralism and Landscape Sustainability: A Mediterranean Perspective

The contraction of traditional pastoral practices in the last century has prompted a rapid transformation of those landscapes whose character had been shaped by pastoral mobility. A transformation that is accentuated by the consequences of climate change. This process is particularly relevant in Mediterranean landscapes, where vertical and horizontal transhumance have been practiced for millennia and are currently in rapid decline. To understand what might happen to these pastoral landscapes in the future we have to investigate their long-term evolution. Reconstructing the processes that led to the transformation of vegetation, soil and landforms under the pressure of mobile herders, provides us with precious insights to anticipate future changes. The PLAS research program (Pastoralism and Landscape Sustainability) combines methods from mathematical, natural and human sciences to investigate the consequences of the long-term interaction between pastoralists and environments, focusing on different regions of the old continent. In this paper, the first results from two case studies in the Mediterranean will be presented. The analysis of prehistoric transhumance in the Alps and modern agropastoralism in Aspromonte have revealed that animal farming is responsible for the development of the current character of these mountain landscapes.

Carriere, Ed [167] see Croes, Dale

Carrillo, Sebastian [158] see Lira, Nicolas

Carr-Meehan, Kaia [281] see Beller, Jeremy

Carroll, Jon (Oakland University) and E. W. Duane Quates (USDA)
[224]

Synthesizing Multiscalar Remote Sensing Data for Archaeological Prospection

Established terrestrial remote sensing tools like ground-penetrating radar (GPR), magnetometry, and electrical resistivity and conductivity have been used with great success for nondestructive archaeological prospection. Similarly, recent technological advancements have made remotely sensed data collected from airborne and space platforms both affordable and accessible to archaeologists. How well these datasets complement each other at a variety of spatial and temporal scales remains uncertain. This discussion recounts the benefits and challenges of synthesizing multiscalar datasets for cultural resource management (CRM) on public lands located in south-central Michigan.

Cartajena, Isabel [306] see De Souza, Patricio

Carter, Alison [56] see Stark, Miriam

Carter, K. (Wichita State University) and Crystal Dozier (Wichita State University)
[202]

Microfossil Analysis of a Grinding Stone from the Etzanoa Archaeological Site

Microfossil and residue analysis can provide valuable information about past dietary practices and environments. Etzanoa (14CO3) or the Arkansas City Country Club site, is an Ancestral Wichita site attributed to the Lower Walnut Focus of the Great Bend Aspect. This site is situated on the Walnut River at its confluence with the Arkansas River and is dated to roughly 1450–1715 CE. During the 2021 field season, a grinding stone was recovered, and samples were taken from both surfaces. To better understand the foodways and the environment of the Ancestral Wichita, microfossil and residue analysis was conducted. Observed microfossils include pollen, fungal spores, plant tissue, and possible helminth eggs. This poster presents the findings of the study.

Carter-Davis, Cindy
[195]

Discussant

Carvajal Contreras, Diana
[222]

Chair

Carvajal Contreras, Diana
[259]

Shark Interactions in Early Times: A Comparison of Some Sites from Colombia and Panama

The data obtained from the zooarchaeological remains of some Panamanian Pacific sites and Colombian Caribbean Sites allowed for unprecedented discussions about the role of sharks in the lifestyle of precolumbian inhabitants on the intermediate area. People captured and processed sharks, using their body parts both as a food source and for ornaments. These data also provide a window for reflecting on the use of the different habitats.

Carvajal Contreras, Diana [222] see Isaza, Ilean
Carvajal Contreras, Diana [222] see Sharpe, Ashley

Carvalho, Milena (ICArEHB, Universidade do Algarve), Lukas Friedl (University of West Bohemia, ICArEHB), Michael Benedetti (University of North Carolina, Wilmington, ICArEHB), João Cascalheira (ICArEHB, Universidade do Algarve) and Jonathan Haws (University of Louisville, ICArEHB)
[247]

Reconstructing Climate and Environment in Paleolithic Western Iberia: A Stable Isotopic Study of Organic Remains at Lapa do Picareiro

Portuguese Estremadura (central Portugal), is an understudied region in Paleolithic research with several key Middle and Upper Paleolithic sites that have provided important information on human lifeways in westernmost Europe during the Late Pleistocene. One of these is Lapa do Picareiro, a rare type of site on the Iberian Peninsula, with end-dates for the Middle Paleolithic (~45–42 ka cal BP) and Upper Paleolithic deposits containing evidence of early Aurignacian (~41–38 ka cal BP), Gravettian, Solutrean and Magdalenian occupations. Picareiro

offers the opportunity to assess Neanderthal and modern human paleoecology in a stratified and well-dated site with a growing number of paleoenvironmental records. Here, we present new stable isotopic data (carbon and oxygen) derived from organic materials associated with Middle and Upper Paleolithic deposits of Picareiro, elaborating on one of a handful of existing zooarchaeologically based stable isotope environmental records in Paleolithic Portugal. We reconstruct the ecology of Paleolithic humans using these data and combine this with the results of existing environmental records obtained from organic and sedimentary sources at the site.

Carvalho, Milena [225] see Haws, Jonathan

Carvalho, Milena [265] see Karrar, Osman

Carver, Jay (4AD Consultants Ltd)

[63]

Discussant

Casana, Jesse (Dartmouth College), Carolin Ferwerda (Dartmouth College), Jonathan Alperstein (Dartmouth College), Zachary Silvia (Brown University) and Michael Adler (Southern Methodist University)

[84]

Remote Sensing of Archaeological Landscapes at Picuris Pueblo

In 2022, our team conducted experimental surveys at Picuris Pueblo using a new, drone-deployed lidar sensor alongside aerial thermal and color imaging to successfully map extensive remains of ancestral agricultural terraces and related archaeological features. This paper presents results of our 2023 efforts to expand on our initial results, extending lidar survey to cover 10+ km² of forested landscapes both on Picuris Pueblo and nearby federal lands, revealing vast areas of previously undocumented agricultural fields, water management features, and settlement sites. In addition, we conducted ground-penetrating radar, magnetic gradiometry, and thermal imaging at the historic center of Picuris Pueblo and several nearby sites, offering new insights into the location and preservation of subsurface archaeological features. Collectively, our results demonstrate how this suite of noninvasive and nondestructive remote sensing methods can be efficient and powerful tools for discovery, documentation, and interpretation of the rich archaeological landscape of Picuris Pueblo.

Casana, Jesse [283] see Alperstein, Jonathan

Casana, Jesse [130] see McLeester, Madeleine

Casanova-González, Edgar [240] see López Puértolas, Carlos

Casanova Vásquez, Erick [284] see Oliver, Kalei

Casanova Vásquez, Erick [185] see Sharp, Emily

Cascalheira, João (ICArEHB, University of Algarve)

[67]

FINISTERRA: Population Trajectories and Cultural Dynamics of Late Neanderthals in Far Western Eurasia

In recent years, knowledge of the processes involved in the disappearance of the Neanderthals and the successful expansion of our species across Eurasia has substantially increased. Still, the spatiotemporal variability of the presumed mechanisms behind Neanderthals' demise makes evaluating the replacement at a continental scale very challenging. Iberia, due to its cul-de-sac position and the role of its southern regions as one of the last refugia for the Neanderthals, represents an ideal natural setting for testing models of cultural and demographic trajectories leading to the disappearance of those populations. This poster introduces FINISTERRA, a project that seeks to expand this framework by implementing an integrative, interdisciplinary,

multi-scale approach to the archaeological and paleoenvironmental records of late Neanderthals in southwestern Iberia. Combining geoarchaeological, chronological, and paleoecological evidence, FINISTERRA will (1) provide a detailed characterization of late Neanderthal adaptive systems, presenting high-resolution data on the timeline of events leading to their disappearance; (2) investigate the presence of the so-called early warning signals of Neanderthals' demise through the use of cutting-edge quantitative analyses; (3) explore alternative hypotheses of a gradual or sudden loss of Neanderthals' resilience by considering the impacts of climate change and the spread of modern humans into western Eurasia.

Cascalheira, João (ICArEHB, University of Algarve)

[126]

Chair

Cascalheira, João [162] see Belmiro, Joana

Cascalheira, João [126] see Bicho, Nuno

Cascalheira, João [247] see Carvalho, Milena

Cascalheira, João [199] see Cobo Sánchez, Lucía

Cascalheira, João [126] see Ferar, Nolan

Cascalheira, João [225] see Haws, Jonathan

Cascalheira, João [126] see Sánchez-Martínez, Javier

Case, Joey [232] see Powis, Terry

Caseldine, Christopher (Arizona State University)

[144]

Discussant

Caseldine, Christopher [310] see Abbott, David

Casillas, SJ [286] see Godhardt, Ava

Cassiodoro, Gisela [77] see Espinosa, Silvana

Castañeda, Alejandra (CNRS, ArchAm UMR8096)

[240]

Characterization of Chupícuaro and Cuicuilco Ceramics Technical Traditions: Preliminary Results

For the last decades, the existence of stylistic similarities between Chupícuaro ceramics and those found in some Preclassic sites in the Basin of Mexico has raised questions on the nature of the interactions between these two regions. In this paper, we will present the preliminary results of the reconstruction of the *chaînes opératoires* of ceramic material from collections from Chupícuaro sites TR6 and JR24, as well as some ceramic collections from Cuicuilco. We propose that applying a study of *chaînes opératoires* of ceramic materials, which we view as an alternative method to the typology approach, will allow us to characterize the technical traditions of the pottery communities of the sites we researched. Their comparison will allow us first to characterize the know-how involved in the ceramic production of both societies, and secondly to evaluate the presence or absence of a social affiliation between the Chupícuaro potters and those of the Basin of Mexico.

Castañeda, Alejandra [240] see Alloteau, Fanny

Castañeda, Amanda (Sul Ross State University, Center for Big Bend Studies), Charles Koenig (Sul Ross State University, Center for Big Bend Studies), Victoria Roberts (Texas State University) and Jerod Roberts (Texas State University)

[332]

Patterned Pictographs: The Rock Imagery of Eagle Nest Canyon in a Regional Context

The rock imagery of Eagle Nest Canyon (ENC) is well known to many archaeologists and canyon visitors, especially at three sites: Eagle Cave, Kelley Cave, and Skiles Shelter. However, six additional rock imagery sites within ENC and adjacent tributaries are infrequently visited but still provide important contributions to the overall corpus of pictographs in the ENC vicinity. This paper provides a brief summary of nine rock imagery sites stewarded by the Skiles family using data collected during Shumla's Alexandria Project. Second, we discuss the research potential of comparing prominent iconographic elements from ENC sites to the larger regional Alexandria dataset. Our analysis uses iconographic observations and panel imagery from the Alexandria database to explore the attributes of speech-breath, rabbit-ear headdresses, and antlered anthropomorphs. This data synthesis demonstrates not only iconographic connections between ENC rock imagery sites and other Lower Pecos Canyonland (LPC) sites, but it also shows that some ENC sites have unique graphic expressions of certain elements. This paper demonstrates the diversity and importance of the painted imagery within Eagle Nest Canyon as well as the utility of the Alexandria Project database for future regional rock imagery studies.

Castañón-Suárez, Mijaely (Colegio de Michoacán)

[290]

Chair

Castañón-Suárez, Mijaely (Colegio de Michoacán)

[290]

Interaction and Exchange between Tingambato and the Central Michoacan Area in West Mexico

Long-distance interactions and exchange of goods should leave marks in the material record. Because of the movement of objects or goods, such exchange will be reflected in the presence of foreign objects or technologies. Interactions are themselves a communication process in which ideas and knowledge are transmitted. This is reflected in the expansion of stylistic elements and cultural syncretism, through the adoption, resignification, reproduction, and transmission of ideas, styles, or cultural elements. This presentation aims to address the development of and changes in interactions and mechanisms of exchange between Tingambato, the Michoacán Lake region, and the frontier with Tierra Caliente during the Classic and Epiclassic periods (AD 1–800) as reflected in ceramics and obsidian. The study applies archaeometry techniques such as optical mineralogy and petrographic analysis in thin sections and Electron-Probe Microanalysis (EPMA).

Castañón-Suárez, Mijaely [290] see Aguayo Haro, Ramiro

Castellanos, Cecilia [193] see Williams, Veronica

Caster, Joshua [283] see Fairley, Helen

Castilla, Eldetello [158] see Torreggiani, Irene

Castillo, Cristina (Institute of Archaeology [UCL]) and Dorian Fuller (UCL)

[217]

Vegeculture Agriculture in the Ethiopian Highlands: The Archaeobotany of Enset

Although Ethiopia is remembered for famines in recent decades, the zone of vegicultural agriculture in the

southwest has largely avoided food insecurity. Here agricultural systems are usually centered on *Ensete ventricosum*, a tree-like vegetative starch crop, an endemic staple food for 20 million people. Our current research combines archaeobotanical work with genetics and ethnographic work with colleagues from Royal Botanic Gardens Kew and at UCL Institute of Archaeology. This paper provides the first results of an archaeobotanical methodology to identify *Ensete* and infer its domestication and evolution through a focus on phytoliths. Fifty enset leaf samples, including wild and cultivated landraces, have been processed to compare phytolith extraction methodologies, phytolith variation, and morphometric traits, offering new criteria for separating *Ensete* and recognizing variation related to plant part, growth environment, and domestication.

Castillo, Feren [53] see Torres Morales, Genesis

Castillo, Karime (Bowdoin College)

[114]

Glass in Colonial and Early Independent Mexico: Investigating Its Context of Use and Symbolic Value

After arriving in Mexico in the sixteenth century, glass, and the technology to make it, slowly found their way into the everyday life of colonial populations in Mexico City, Puebla, and other areas of New Spain. While glass routinely appears in archaeological excavations of colonial and nineteenth-century contexts in Mexico, it is not as deeply studied as other colonial materials such as ceramics. Understanding how it was represented in art can offer us insights into its context of use and symbolic value, which can help us place the material in its social context and consider it in relation to other elements of material culture. By looking at representations of glass objects in colonial and nineteenth-century paintings, historical documents, and glass from Mexican museums and archaeological collections, this paper explores the place glass occupied in colonial and nineteenth-century Mexican society.

Castillo, Nina [124] see Marcone, Giancarlo

Castillo Acal, David

[261]

Constructing Perspectives for the Application of Wood Charcoal Analysis in Kiuic, Yucatán, Mexico

Archaeological investigations in the Bolonchen district have as one of their goals the understanding of the variation of the natural resource exploitation by the ancient settlers in the region. An approach that has been a relevant for reconstruction of the landscape and prehispanic forest management is provided by the archaeobotanical data, and specifically the analysis of wood charcoal preserved in archaeological contexts (anthracology). In the north of Yucatán there are still few anthracological research studies, due to both the excavation strategies and preservation conditions of carbon. The lack of carbon research in the northern Maya Lowlands compared to central Maya Lowlands could have an effect in the interpretation of forest management in the Puuc region. In this sense, it was proposed to conduct an anthracological analysis for the site of Kiuic. The methodology consists in the construction of a data base of recovered carbon fragments from soil samples collected during the 20 years of excavations in Kiuic and the definition and selection of contexts with carbon fragments with optimal conditions of preservation for taxonomical identification. This presentation discusses the contexts with good carbon fragments that was recovered so far, and the sociocultural implications for past forest management reconstruction.

Castillo-Jiménez, Samuel [126] see Alcaraz-Castaño, Manuel

Castillo-Jiménez, Samuel [162] see Sánchez De La Torre, Marta

Castillo Levicoy, Carlos [77] see Nuevo Delaunay, Amalia

Castleberry, Crystal (Colonial Williamsburg Foundation)**[16]***A Complicated Healing Process: Community Engagement at the First Baptist Church and Powder Magazine Burial Grounds*

As an institution that has contributed to the Black community's historical erasure, Colonial Williamsburg is still working to rebuild trust and right many wrongs. Few projects have made that more apparent than the First Baptist Church excavation and the rediscovery of its burial ground. With the discovery of Confederate burials at the Magazine the following year, we are balancing rebuilding that trust alongside the respectful treatment of those who fought for the subjugation of free and enslaved Black individuals. This paper offers a look at two very different burial grounds and the thoughtful consideration of whose voices should be brought to the table. Further, it discusses the complications that arise when working with a community of known descendants and engaging with stakeholders representing people for whom no clear descendant community exists under other circumstances.

Castro, Mark (Cal Poly Humboldt Cultural Resources Facility)**[10]***Discussant*

Castro, Mark [141] see Angeloff, Nick

Castro, Silvina (CONICET, Laboratorio de Paleoecología Humana, Universidad Nacional de Cuyo), Erik Marsh (CONICET, Laboratorio de Paleoecología Humana), Lucía Yebra (ICB-CONICET-UNCuyo) and Valeria Cortegoso (CONICET-UNCuyo-Argentina)**[266]***The Origin and Dispersion of the Bow in the Andes (16–37°S) Based on a Controlled Database of Projectile Point Metrics*

We present a discriminant metric study of stone projectile points ($n = 422$) from 21 archaeological sites in the Andes of South America (16–37°S). We make a critical use of comparative datasets, which suggest that darts may have been smaller than previously thought. We assess the use life of each point and tie them to reliable chronological sequences, in order to increase the reliability of our data. Our results show that in the Lake Titicaca Basin and northwestern Argentina, bows had replaced spear-throwers by ~1780–950 cal BP, prior to the development of complex societies such as Wari and Tiwanaku. South of 29°S, the results suggest that bow technology was transmitted from north to south, since the earliest arrow-sized points at 29°S date to 3000 cal BP and at 37°S, 1800–1000 cal BP. North of 34°S, the continental limit of domesticated plants and animals, there is a gradual abandonment of the spear-thrower. South of 34°S in northern Patagonia, both weapon systems coexisted. We suggest that bow and arrow technology was not an independent invention in the southern Andes, but instead, it appeared in new groups via macroregional technological borrowing among Andean herders.

Castro, Silvina (CONICET, Laboratorio de Paleoecología Humana, Universidad Nacional de Cuyo)**[306]***Chair*

Castro, Silvina [306] see Marsh, Erik

Catlin, Kathryn (Jacksonville State University)**[48]***Chair*

Catlin, Kathryn (Jacksonville State University) and Douglas Bolender (University of Massachusetts, Boston)

[91]

The Role of Small Dwellings in the Viking Age Settlement of Iceland

Historical accounts of the Viking Age settlement of Iceland largely focus on the lives of elite colonists and landowners. Although these texts are clear that non-elite and enslaved individuals were present and played a critical role in the settlement of the island, archaeological researchers have struggled to identify these people in the material record. This is, in part, due to the singular space of Norse farmsteads, in which household members, from landowner to enslaved, generally lived and worked together. We discuss new research from Hegrans, North Iceland that has revealed the presence of small dwellings in the early phases of settlement that hold the promise of revealing the lives of the non-elite. The small dwellings are located on marginal land and exhibit economic and subsistence strategies as well as architectural features that distinguish them from other excavated farmsteads. They had short occupations and do not appear as a site type after the Viking Age. These observations suggest a social and ecological role in the settlement that is unknown from later historical and ethnographic texts. We present new excavation data from the site of Kotið, a small dwelling located on marginal land that dates from the earliest phase of settlement.

Catlin, Kathryn [48] see Bolender, Douglas

Catlin, Kathryn [48] see Kiker, Summer

Catlin, Kathryn [48] see Speller, Jeffrey

Catlin, Kathryn [48] see Vaughn, Evie

Caton, Riley [202] see Purcell, Gabrielle

Caval, Sasa

[245]

Patterns of a Life and Death through Machine Learning: Archives of the Bois Marchand Cemetery in Mauritius

The Bois Marchand cemetery in Mauritius was established in 1867, during the malaria epidemic, as the largest in the Indian Ocean and the third largest in the world. The Bois Marchand Cemetery Archive (1867–to date) holds a near-complete set of burial records of individuals interred in this cemetery. The records contain personal information of the deceased, from their names, sex, and place of birth to their date, place, and cause of death, and the date and type of burial, and provide a unique repository of demographic and disease data. We are making this information computationally usable with Handwritten Text Recognition (HTR) technology. AI technologies, such as machine learning, are transforming how archival data is processed and analyzed. Machine-learning algorithms can be trained to recognize patterns and make predictions based on the given data. This paper will present our work and some of these patterns.

Cavero Palomino, Yuri [299] see Matsumoto, Yuichi

Cayón, Luis [178] see Pugliese, Francisco

Ceballos, Xanti (University of Arizona)

[125]

Settlement Pattern Transition from the Middle Formative to the Classic in Southern Mesoamerica and the Establishment of Veracruz and Maya Spheres through the Analysis of Low-Resolution Lidar

This paper examines the settlement patterns transition from the Middle Formative to the Classic period through a low-resolution lidar analysis in Southern Mesoamerica, over a 25 km² area. Based on previous lidar research carried out by the Middle Usumacinta Archaeological Project (MUAP), in 2022 I did a low-

resolution lidar analysis with a dataset from the Instituto Nacional de Estadística y Geografía (INEGI), an open-access resource from the Mexican government. The initial goal was to find the total extent of early ceremonial complexes outside the Maya and Olmec regions and understand the social dynamics. However, the lack of early ceremonial complexes in Central Veracruz and Oaxaca showed that the distribution was probably restricted to the Isthmian interaction sphere (Gulf Coast, Central Chiapas, and southern Pacific coast). Furthermore, the results from my analysis demonstrate that in the transition between periods the settlement pattern changed with the establishment of Veracruz and Maya spheres. We argue that intensive interregional interactions and cultural and ecological factors might have played a role in this transition.

Cebeiro, Adela [126] see Pargeter, Justin

Cecil, Leslie [255] see Gallareta Negrón, Tomás

Cedió, Jakob [106] see Pelaez-Ballestas, Ingris

Celia, Claudia (Salve Regina University), Heather Rockwell (Salve Regina University) and Nathaniel Kitchel (Salve Regina University)

[335]

Heat Alteration of Red Munsungun Chert

Red chert from the Munsungun Lake formation in northern Maine is found in late Pleistocene Fluted-Point period archaeological sites across northeastern North America. Despite its prevalence, there is no literature detailing the effects of heat alteration on red Munsungun chert. Here we report the effects of experimental heat alteration on red Munsungun chert. We conducted a controlled heat experiment in which flakes of chert were heated to specific temperature steps in a furnace. A campfire heat-alteration experiment was also conducted to determine how Munsungun chert reacts to open flame. We report that red Munsungun chert responds to heat at temperatures beyond 500°C. We also observed that some blackening occurs in flakes that are in close proximity to open flame. Interestingly, we observed in both the campfire and furnace experiments that red Munsungun chert breaks apart into two or more pieces in response to temperatures over 500°C. These results have many implications for the study of Pleistocene Fluted-Point period archaeological sites in northeastern North America. In particular, these results will help identify hearth-centered activity areas in the absence of preserved hearth features.

Celle, Ludovic (Independent artist and researcher)

[302]

MITLA 3D: A Digital Reconstruction of the Most Important Postclassic Zapotec City

Illustrating the past in a faithful and immersive way requires finding the right balance between the available archaeological data and the imagination that fills in the many blanks. This presentation is about such an experience, from a background in architecture and digital arts. The Zapotecs are one of the most fascinating cultures of the Americas, and after Monte Albán, Mitla is definitely their most famous city, often compared to a “Vatican” for the map of Postclassic Mesoamerica. In spite of its importance, until 2018, Mitla had never been reconstructed in 3D, and was rarely depicted in color. The work presented here, self-funded, the sum of a full year of modeling on Blender, is an attempt at offering our eyes the spectacular aspect of Mitla-Lyobaa in its golden age. The 3D here allows one to grasp the city at all scales, in the vast natural landscape, in urban districts, and in intimate corners of the architecture. This work is also a positive story of meeting with today’s Mitla, creating faithful images to celebrate the locals’ amazing ancestry, contributing to their pride of an inspiring past.

Cercone, Ashley (University at Buffalo)**[255]***Thinking Locally: A Glimpse at Ceramic Production at Külliöba, Turkey, during the Early Bronze Age*

After the birth of the Turkish Republic, German archaeologists fled to Turkey in search of new beginnings and freedom. These archaeologists would soon head the first archaeology departments in Istanbul and Ankara, shaping how budding archaeologists would complete their training and research for the next 90 years. Traditionally, ceramic research has been focused on creating chronologies, publishing catalogues, and making visual cross-comparisons between pots to argue for large-scale trade. However, in the last 20 years, scientific methods, like neutron activation analysis and residue analysis, have slowly infused into Anatolian archaeology, primarily due to interdisciplinary departments and international collaborations. Over the past few years, scholars at the archaeological site of Külliöba, located in inland Western Anatolia, have been using various methodologies to reexamine resource acquisition, craft production, pyrotechnology, and trade. This paper will discuss past and present trends in ceramic studies in Turkey and provide insight into ceramic production and “trade” at Külliöba during the Early Bronze Age (3000–2000 BCE) through the interpretation of thin sections. Contrary to current belief, the settlement was more often producing pottery locally and interacting with nearby neighbors.

Cerezo-Román, Jessica (University of Oklahoma), Megan Walsh (University of Oklahoma) and Jane Buikstra (Arizona State University)**[241]***Cremation Mortuary Practices at Phaleron during the Archaic Period*

In this paper, we reconstruct cremation mortuary practices from the Archaic site of Phaleron (ca. 750–480 BCE) located in Athens, Greece. We build on performance theory and issues of identities to answer two main research questions: (1) How was the identity(ies) of the cremated individuals portrayed in the cremation burial custom and how does that relate to the biological profile? and (2) What are the different stages of cremation rituals at Phaleron and what are the possible cultural significance? We do this by reconstructing the biological profile of individuals, examining thermal alterations, burial construction, and broader archaeological information from the site. Preliminary results highlight the variation in cremation rituals between different individuals. Some individuals were highly burned while others were not, suggesting diverse levels of pyrotechnological efficiency and/or resource accessibility. Additionally, the necropolis of Phaleron was an active space where people buried and memorialized their dead in many ways. This research project emphasizes the benefits of exploring cremation rituals within a holistic view, considering the decedent and how their mourners and community treated the individual at death.

Cervantes Quequezana, Gabriela [53] see Cutright, Robyn

Cesario, Grace [48] see Ritchey, Melissa

Cetin, Enis [105] see Foe, Aldo

Chabot, Jacques [126] see St-Pierre, Éloïse

Chacón, Kenia [291] see Barrios, Edy

Chacón, Kenia [291] see McNeil, Cameron

Chacon, Richard**[333]***Shamans, Altered States, and Cultural Appropriation*

This lecture will focus on the multifaceted world of shamanism. The presentation will show how shamans serve as vast repositories of traditional indigenous knowledge and native beliefs. The effectiveness of shamans as health care practitioners will be considered. The ingestion of mind altering substances by Amazonian shamans as part of their curing practices will be explored. Positive and negative aspects of shamanism will be discussed. Issues surrounding the ongoing cultural appropriation of various shamanic rituals will be documented. Lastly, how contact with the Western world threatens to destroy this form of traditional wisdom will be addressed.

Chadwick, William (Indiana University of Pennsylvania)**[10]***Discussant*

Chadwick, William [105] see Palmiotto, Andrea

Chagoya Ayala, Itzel (Instituto de Investigaciones Estéticas, Unid. Oaxaca, UNAM), Soren Frykholm (Proyecto Arqueológico Monte Negro-U. Michigan) and Edgar Mendoza Cruz (Depto. de Colecciones Arqueológicas Comparativas)**[160]***Otras formas de observar Monte Negro: Arqueología digital en un sitio del Preclásico*

Este sitio mixteco del Formativo tardío (300-100 aC) fue explorado por el equipo de Alfonso Caso y Jorge Acosta entre los años 1936 y 1940. Es sobre esta base, en el marco del Proyecto Arqueológico Monte Negro 2023 que esta investigación se enfocó en profundizar en aspectos arquitectónicos por medio de técnicas fotogramétricas implementadas en los templos T y X. En particular, el *Reflectance Transformation Imaging* (RTI) que permite examinar las superficies de interés de una manera detallada, encontrando aspectos difíciles de identificar a simple vista y la fotogrametría 3D, la cual brinda modelos digitales que pueden ser analizados, al mismo tiempo de ser una excelente forma de registro y exposición. Con estos modelos, se logró identificar las modificaciones que han sufrido los petrograbados que se encuentran en bloques que conforman las escalinatas, esto teniendo como referencias las fotografías tomadas por Caso. Finalmente, se sugiere una interpretación iconográfica y se brinda un panorama más amplio de la interacción de la población actual con el sitio arqueológico, junto con las condiciones de conservación en las que se encuentra, aspectos que se desarrollan en este trabajo.

Chai Andrade, Travis (Princeton University) and Emma Ljung (Princeton University)**[98]***Undoing Aesthetics: Remediating Problems in the AP History Curriculum through Indigenous Artifacts in University Museums*

In 2022, 34.6% of US high schoolers took an AP test, US History being among the most popular subjects. Yet, despite heightened sensitivity toward Indigenous cultures and their material remains, the AP history curriculum still displays visible shortcomings in this regard. Moreover, in college, many students encounter Indigenous cultures through one discipline only: art history. Within this discipline, introductory courses often treat artifacts as aesthetic objects whose stylistic contents merit study even when original context, use, and provenance are unknown. To the student, the museum becomes an indisputable “last home,” the culture isolated in the past. But those aesthetic and stylistic contents only illuminate a brief, temporal fragment of larger, longer stories. In effectively halting museum study and thus the aestheticizing approach to objects as the introduction to Native American cultures, the COVID-19 pandemic offered an opportunity to rethink how Indigenous artifacts tell multiple stories, stories not only of the past but of the present. In shifting the conversation to the present, those artifacts can fill important learning gaps inherited from the AP curriculum.

This paper uses an Alaskan harpoon socket at the Princeton University Art Museum to demonstrate how actively de-aestheticizing research assignments can generate productive learning outcomes.

Challis, Sam (Rock Art Research Institute, South Africa) and Andrew Skinner (University of South Africa UNISA)

[156]

An Animist Shamanism: The World behind San Rock Art

Hunter-gatherer cosmology in southern Africa is very clearly multinatural; persons human and nonhuman working to behave intelligibly to each other so that relations are brokered and maintained. Until recently, however, rock art interpretations have implied a physical division between realms animal and human, spiritual and mundane. Ironically, the dominant paradigm was founded on the principle that the images did not represent everyday life. The New Animisms have offered up a palette of colors with which to paint a new picture of San rock art, one which emphasizes negotiation-as-navigation, social topographies and the ontological consequences of place, position, and perspective. Instead of showcasing shamans' power, it transpires that images were rather made to broker "proper" relations between entities on a shared landscape.

Chambrade, Marie-Laure (ISAC; UChicago)

[139]

Settlement Patterns, Water Accessibility, and Circulation in the Azraq Watershed during the Neolithic Colonization (Seventh–Sixth Millennium BCE)

The end of the neolithization process (seventh–sixth millennium cal BCE) was a period of settlement peak in the arid margins of the Fertile Crescent. In northeastern Jordan, the combination of a long sequence of Neolithic occupation and several decades of field investigation provide the opportunity of an in-depth study of this phenomenon through a regional perspective. This presentation will focus on the Azraq watershed with a particular emphasis on the Black Desert plateau, also known as Harra, which drains the northeastern part of the catchment basin. Based on the results of past and present field programs, including unpublished data from the Western Harra Survey project, it intends to propose a comprehensive overview of the colonization of the region during the PPNB and the Late Neolithic. It will question settlement patterns and their evolution over two millennia through the lens of water availability, in quality (type of water source), space (proximity and accessibility), and time (short-term water seasonality vs. long-term wet/dry climatic periods). Beyond subsistence and given the circulation difficulties in the Harra, the potential role of watercourses as corridors between Azraq, the Black Desert, and beyond will also be assessed.

Chamoun, Tony (Syracuse University)

[209]

Archaeology's Empire of Sectarianism

Social historians demonstrate the historical contingency of sectarianism, which may be defined as a process and discourse that entwines religious sects and identities with political ones, on the ground and in state arrangements (Makdisi 2000). Despite this contingency, academic, government, and public circles doggedly reify sectarianism as "the" principle of the Middle East—i.e., social worlds are transhistorically segregated and explained by sect (Makdisi 2017, 2019). Using bioarchaeological and archival evidence, I trace the shifting coordinates of sectarianism and its entwinements with other processes, revealing tensions between life and death on the ground, Ottoman and Euro-colonial imperial knowledge-making, and archaeology's politics of knowledge. I argue that archaeology is among circles that inappropriately—and subtly—reify sectarianism as "the" principle of the Middle East, and this reification is related to imperial practices. I thus call for a revision of the subtle workings of archaeology's knowledge, as well as the power and identity politics and milieus that sustain it. Taking sectarianist truths as objects of inquiry is an effort to attend to subtle reconfigurations of violence in multiple registers. It is to engage sectarianism's agility as "imperial duress" (Stoler 2016) that shapes (inter)state structures and landscapes, violently enfolding lives, deaths, and relations.

Chamoun, Tony (Syracuse University)**[209]***Chair***Chan, Ching Yi (Mavis), Norman Easton and Robert Sattler****[49]***Archaeological Sites of the Southern Yukon-Alaska Borderlands: Distribution, Chronology, and Dineh Place Names*

This poster will map out selected archaeological sites of the SY-AB and provide a table of associated radiocarbon dates calibrated to the most recent IntCal 20. Human occupation of what was then extreme southeastern Beringia begins in the Allerød interstadial (ca. 14.2–12.9 Kya) demonstrated at Little John and Britannia Creek in Yukon and Linda's Point and Nateł Na' in Alaska. The SY-AB also contains a continuous history of Holocene occupations (Moose Lake, Little John, the Tok and Deadman Lake site complexes) and a rich record of Late Prehistoric and postcontact Amerindian-European interaction (Nataełde/Batzulnetas, Nabesna/Northway, Chisana, and Scottie Creek site complexes). Archaeological site distribution is complemented by an extensive Ahtna and Upper Tanana native place-names corpus and associated ethnohistories, which map onto many of the archaeological sites or places we can reasonably expect to find archaeological deposits.

Chan, Ching Yi (Mavis) [49] see Hutchinson, Vance

Chan, Evelyn (Itza Project), Timothy Pugh (Queens College; Graduate Center, CUNY) and Kevin Schwarz (ASC Group Inc.)**[110]***"Domesticated Waterscapes" in the Petén Lakes Region, Petén, Guatemala*

A recent lidar survey of the Petén Lakes in Petén, Guatemala, has confirmed landscape modifications suggested by previous research and revealed new evidence of water management and settlement placement. Influenced by Joel Palka's recent work among the Lacandon Maya, we consider domesticated waterscape features such as canals and settlement drainage systems. We also consider the selection of living spaces. Canals connect some lakes and would have allowed canoe traffic; however, some are disappearing due to modern construction. Many settlements were designed with drainage systems that would have alleviated standing water and, in some cases, continue to do so. The locations of some settlements appeared to have been selected so that they are bounded on two sides by water. While our primary focus is the Middle to Late Preclassic period, many of the features discerned by the lidar survey are yet to be dated.

Chan, Evelyn [275] see Pugh, Timothy

Chang, Claudia (ISAW New York University)**[215]***Discussant***[17]***Chair***Chang, Claudia (ISAW New York University), Sergey Ivanov (Kyrgyz National University) and Perry Tourtellotte (Independent Researcher)****[17]***On the Periphery of the Iron Age World System: "Animal Style Art" in Southeastern Kazakhstan*

The commodification of aesthetic traditions in the Eurasian steppe world may be explored as a method for tracing the economic and political spheres of the larger Eurasian World System in the first millennium BCE. This paper will address the question of whether Scythian "animal style art" was part of a circulatory system manipulated by peripheral "nomadic" groups to perpetuate sociopolitical interests and territorial claims. The

case study from the Talgar region of southeastern Kazakhstan examines objects found at settlement sites and in funerary contexts of the Saka culture. A carnelian bead, a bronze amulet, and a carved bone disk found at Iron Age settlements suggest long-distance commodity trade across a proto-Silk road. In the nearby Issyk burial mound of Golden Warrior, the splendid gold foil, plaques, and headdresses convey notions of political and status emulation for a nomadic elite within a larger political arena of competitive nomadic groups. Traditionally, discussions of Eurasian animal style art have been the intellectual domain of art historians and archaeologists. This paper extends the discussion of “animal-style art” to include a world-systems approach. The bigger question is whether a visual trope—an aesthetic tradition—can be examined through the lens of world-systems analysis.

Chapman, Bruce [263] see Comer, Jacob

Chapman, Jordan

[98]

Charting Science Communication with Geoarchaeology

Science communication can be a daunting task for researchers who seek public engagement, especially through multimedia formats. Building from your knowledge, experience, and research will make developing multimedia skills more approachable. Creatively including scientific principles to develop aspects like storytelling and in-media citations helps to legitimize your work and drives engagement. Recording equipment and software may be accessible through your organization, lowering initial costs and can be inexpensive for at home production. Open-source software is also available, sometimes for free or trial periods. With thoughtful planning, you can develop high-quality projects, and major science outlets host workshops year-round to help develop media and writing skills. Most major platforms provide engagement metrics and analytic tools, with exportable data, that provide insight into audience demographics. Ultimately, science communication can be a rewarding endeavor that drives awareness and engagement with your research and organization while also providing opportunities for networking and collaboration.

Chapman, Larkin (University of New Mexico)

[249]

Analysis of Radiocarbon Dates on Terminal Pleistocene Horses from North America Shows Synchronous Local Extirpation and Overlap with Paleoindian Technocomplexes

Absolute dating in archaeology is dominated by radiocarbon dating, a method that is frequently conducted on zooarchaeological material, creating a large and diverse global dataset that is readily accessible. Though radiocarbon dates are certainly valuable on their own, their value extends beyond their original contexts. When aggregated, radiocarbon dates can also contribute to answering big archaeological questions—for example, debates over North American Pleistocene extinctions. In this paper, I use data from published works and the Canadian Radiocarbon Database to show that there is good evidence that Pleistocene horses and recognized Paleoindian peoples shared the landscape in North America for a substantial period of time. This has considerable implications for our understanding of regional megafaunal extinctions, Paleoindian diet breadth, and horse evolutionary history. By using data produced by multidisciplinary communities and focusing on one taxon, this project uses a complex zooarchaeological dataset to address questions that have permeated generations of researchers. The radiocarbon date modeling used here is an example of how researchers can employ previously published data in addition to new dates to generate aggregations and answer novel questions.

Charles, B and Shannon Freire (University of Wisconsin, Milwaukee)

[330]

“A Name Comes First and the Story Follows”: Archaeology, Story Maps, and the Milwaukee County Poor Farm Cemetery Project

Throughout her career, Patricia Richards conveyed experience and knowledge through storytelling. Impassioned and insightful, these stories often reveal episodes forgotten by written history. As one example, the Milwaukee County Poor Farm Cemetery (MCPFC) represents thousands of stories, generated through a humanistic approach that integrates individuals with their contexts, archaeological and historical. Recent adoption of ESRI Story Maps leverages state-of-the-art mapping and multimodal storytelling technology to connect the MCPFC to the greater Milwaukee community. One goal of this effort is to make transparent the archaeological and osteological methods that led to the provisional identification of four nonadults through associated “affective objects.” The Story Map promotes transparency in archaeological research by detailing both the process of making interpretations (the how we know) and the products of collaborative research (what we know). Whereas the placemaking of a sprawling regional medical campus is quite legible, the previous (and ongoing) land use as a burial site for marginalized members of Milwaukee society has remained relatively invisible. The Story Map endeavor puts narratives from the MCPFC “on the map,” creating a durable record that renders the events of the past and the research of the present legible and accessible.

Charles, B [330] see Jones, Catherine

Charlier, Philippe [190] see Zimmermann, Mario

Chase, Adrian (University of Chicago)

[74]

Discussant

Chase, Adrian (University of Chicago), Brett Houk (Texas Tech University), Elizabeth Graham (University College London), John Morris (Belize Institute of Archaeology [Emeritus]) and Amy Thompson (University of Texas, Austin)

[251]

Cities on the Cutting Edge: Urban Research in Belizean Archaeology

Archaeologists’ views of the breadth and depth of precolumbian Maya urbanism, and Mesoamerican urbanism more broadly, have been repeatedly revolutionized by archaeological researchers in Belize. The first National Science Foundation funding for Maya archaeology centered on determining how the ancient Maya modified the Belize landscape, eventually providing a path for refuting the then-current vacant ceremonial center city model. Modern urban models and methods to study Maya sites as cities have helped demonstrate the social complexity underlying Maya urbanism. The inception of tropical lidar research (that has unleashed a geospatial revolution) also occurred in Belize, providing a wealth of data for comparative urban research. The range of cutting-edge research into the ancient Maya cities of the eastern lowlands echoes the geographic and environmental diversity of Belize. Belize’s coastal, riverine, and upland settlements showcase the full variability of Maya cities and exhibit unique site plans, urban forms, and historical trajectories. At the same time, local differences do not obscure larger patterns and processes relevant to urbanism, both ancient and modern. In short, the ancient Maya cities in Belize (and generations of scholarship) have greatly contributed to our understanding of urbanism—and continue to do so.

Chase, Adrian [251] see Lucero, Lisa

Chase, Adrian [301] see Thompson, Amy

Chase, Arlen (University of Houston)

[251]

Chair

Chase, Arlen (University of Houston), John Morris (Belize Institute of Archaeology [Emeritus]) and Geoffrey Braswell (University of California, San Diego)
[251]

From Marginalized to Impactful: Belizean Archaeology and the Classic Period Maya

The impact of Belizean centers and settlement on ancient Maya civilization of the Classic period (CE 250–900) has been recognized in the last 50 years of research. Before 1975 Belize was seen as being on the fringes of the Maya world and portrayed as a backwater. Most archaeological syntheses focused on the core area of the southern lowlands where the art and architecture of the ancient Maya were replete with hieroglyphic texts on beautifully carved stone monuments. Carved monuments with extended hieroglyphic histories occurred only at limited centers (Caracol, Pusilha) in the country of Belize, making it difficult to contextually place Belizean sites into broader Maya prehistory. Yet, over the last five decades, interpretations concerning Belize's role in the ancient Maya world has changed substantially. Classic-era Belize was actively engaged in the broader Maya world. Belizean coastal sites were significantly involved in the inland salt trade. Altun Ha likely controlled the flow of trade goods emanating from the Atlantic. Caracol rivaled Tikal and Calakmul in global politics relative to the southern Maya region during the Classic era. Half a century of archaeological data has made once marginalized Belizean archaeological remains central for understanding the Classic period Maya florescence.

Chase, Arlen [251] see Awe, Jaime

Chase, Arlen [251] see Helmke, Christophe

Chase, Arlen [34] see Locker, Angelina

Chase, Arlen [34] see Smith, Rick

Chase, Diane (University of Houston), Elizabeth Graham (UCL Institute of Archaeology) and Melissa Badillo (Belize Institute of Archaeology)
[251]

The Shadow Realm: How Belizean Archaeology Has Illuminated the Maya Postclassic Era

Without Belizean archaeological data, we would know very little about the Maya Postclassic period (CE 950–1530). While viewed as a period of lesser cultural development by earlier researchers, Postclassic archaeological research in Belize was published as early as 1898 but generated little further interest in this important era. Carnegie Institution of Washington research in the early 1920s focused on the Postclassic site of Tayasal, Guatemala, but had trouble defining associated archaeological remains pertaining to this time period. The Carnegie excavations in the early 1950s at the Postclassic city of Mayapán, Mexico, did little to improve the overall portrayal of this important era because of bias and poor moral on the part of the excavators. Postclassic remains excavated in the Belize Valley in the 1950s were not fully analyzed until 1976. However, beginning in the 1970s, three long-term archaeological projects in Belize focused specifically on the Postclassic period at Lamanai, Santa Rita Corozal, and Laguna de On. This research demonstrated the artistic vibrancy of the late Maya and the continued presence of sizeable populations that extended into the contact period. The concentrated focus on the Postclassic period in Belize has laid the modern foundation for understanding of this maligned era.

Chase, Diane (University of Houston)
[295]

Chair

Chase, Diane [251] see Awe, Jaime

Chase, Diane [34] see Locker, Angelina

Chase, Diane [34] see Smith, Rick

Chase-Dunn, Christopher [17] see Denmark, Robert

Chavez, Hannah and Teresa Rodrigues**[88]***Archaeology and TCPs*

Perceptions of the past are culturally bound, which can inhibit research objectives and our interpretations. Taking a reflective approach in archaeology encourages researchers to consider the social and political ramifications of their work and how it may affect the communities that they serve (e.g., academia, cultural resource management, descendant groups, public). Cultural resource management (CRM) plays a pivotal role in maintaining and illuminating historical narratives through Section 106 of the National Historic Preservation Act (NHPA) by the recommendations deemed eligible to the National Register of Historic Places (NRHP). For instance, traditional cultural properties (TCPs) may be eligible for the National Register of Historic Places but are seldom adequately evaluated during preliminary cultural resource inventories and surveys. The lack of TCPs on the NRHP can be attributed to several factors, including groups' attitudes toward the NRHP, privacy concerns, and inadequate methods for collaboration and documentation. This paper examines the relationship between archaeology and TCPs within the framework of the NRHP, the benefits of documenting TCPs, the challenges of documenting TCPs, and possible solutions for collaborators to consider when working with TCPs.

Chavez, Rene (UNAM), Maria Encarnacion Camara (Universidad Politécnica de Madrid), Andrés Tejero Andrade (UNAM), Luis Barba (UNAM) and Linda Manzanilla (UNAM)**[152]***Geophysical Prospecting of the Teotihuacan Subsoil*

A geophysical study was carried out on the eastern flank of the Pyramid of the Sun to define the continuation of a tunnel discovered in 1974 under the western entrance of the pyramid. The investigation was carried out in the vicinity of Las Varillas cave, a structure excavated by settlers to obtain construction materials employed to build the city. Total magnetic field and vertical gradient surveys allowed to estimate a 3.3 m thick of alluvial sediment over the basaltic flow. The high-frequency magnetic gradient defined the geometry of Las Varillas Cave and the Euler deconvolution method specified the depth to the top of a tunnel (3–6 m). Two nearly parallel GPR profiles (separated 10 m) surveyed in a NW-SE direction (one passing over the known tunnel), detected the tunnel roof at a depth of 4 m. The second profile depicted a more complex morphology for the pyroclastic horizon. The anomalies associated with the basaltic flow or eruptive centers are clearly depicted. An electrical tomography profile was performed along the first GPR profile. The image showed a region of high values (1000 Ohm m), consistent with the presence of a tunnel at a depth of 4 m. Chavez, Sergio [299] see Juengst, Sara

Chavez, Stanislava [299] see Juengst, Sara

Chávez Perea, Ruddy [212] see Socha, Dagmara

Chazin, Hannah (Columbia University)**[215]**

Pastoralist Spacetimes and Political Life in the Past: Exploring the Value of Living and Dead Animals Archaeologically

Anthropological approaches to value assert that creating and contesting value is at the heart of politics. Herd animals offer a complex window into this basic theoretical insight—they are simultaneously producers of and objects of value and their value cannot be easily reduced to the categories of economic or symbolic value. Analyzing archaeological data from pastoralist societies in the Late Bronze Age (1500–1100 BCE) South Caucasus, this paper considers how the different kinds of value-in-action made possible by living and dead animals shaped political authority. The value of living animals emerges from their potential for future reproductive labor and the affective connections forged through interaction. In contrast, the complex value of dead animals enables other kinds of spatiotemporal transformations. Dead animals weave together the

semiotic potential of wholeness and fragmentation, memory, and the complex temporal rhythms and the unstable futurities of consumption as a social practice. This analysis highlights how living with, working alongside, and killing and eating herd animals has the potential to generate different kinds of relations between humans and animals, shaping intersubjective spacetimes within more-than-human worlds.

Chazine, Jean-Michel (AMU-CNRS/CREDO-France)

[271]

Contribution to Rock Art Interpretation with New Decipherments of Hand Prints

The discovery during the 1990s of an unexpected large rock art field in East Kalimantan, East Borneo, containing more than 2,000 negative hand prints, has led to a different approach of the possible function(s) of this materialization of specific procedures. It has permitted researchers to look for practical interpretations of decipherment of sex gender on these panels. A preliminary computer program had been elaborated yielding interesting results, followed recently by a more precise program deciphering men's and women's presence in numerous caves or shelters of the world. We present here the results, including from South America, of hundreds of significant decipherments completing the previous results and publications.

Cheever, Sylvia (Vanderbilt University)

[324]

Chair

Cheever, Sylvia (Vanderbilt University) and Michelle Young (Vanderbilt University)

[324]

Landscapes of Insecurity in Huancavelica, Peru: Infrastructure, Emplacement, and Quotidian Life in Volatile Surroundings

The Late Intermediate period (1000–1400 CE) in the Central Andean highlands is characterized by balkanization and warfare, a pattern that is materialized through the construction of hilltop forts (*pukaras*) and skeletal trauma observed from Ancash to the Titicaca Basin. After a decades-long hiatus in academic research in Huancavelica, Peru, which was prompted by the propagation of guerrilla warfare carried out by Sendero Luminoso (Shining Path), recent surveys have finally begun to shed light on this understudied region through the identification of previously unrecorded sites. Fortified settlements, lookout stations, tombs, and other infrastructural features are strategically positioned across montane ravines to mitigate violent encounters. These sites embody a “landscape of insecurity,” reflective of the fractured political and social dynamics of the Late Intermediate period. Through this lens, we can begin to recognize the Huancavelica highlands as a landscape that has been forged by both prehispanic and modern violence, while also exploring the practices through which communities create stable space in otherwise tumultuous conditions and emplace themselves within hostile landscapes.

Chen, Guopeng [21] see Lin, Xin

Chen, Honghai [51] see Cui, Yinzi

Chen, Jennifer [20] see Haas, Randy

Chen, Peiyu (Institute of History and Philology, Academia Sinica)

[117]

The Emergence of Pottery Use and its Interpretation: A Case Study from Huaca Negra, Virú Valley, Peru

“Why did people begin to use pottery vessels?” is one of the most compelling questions to archaeologists. As

a site witnesses the transition from the Late Preceramic to the Initial period occupation in the Virú Valley, north coast of Peru, Huaca Negra constitutes an ideal case study to investigate the utilitarian function, cultural traits, and possible social meanings of the first-generation pottery. By putting ceramic remains into the reconstructed spatiotemporal context, the attribute analysis illustrates a clear utilitarian function of this assemblage and its diachronic changes. Both pottery decoration and the petrographic analysis suggest that, although not pursuing consistent or standardized products, ancient potters shared basic ideas of pottery-making, and the shared experience might have facilitated building a sense of community. Investigating “the emergence of pottery use” at Huaca Negra from both economic and social aspects makes the contextualized interpretation possible.

Chen, Ran (University of Arizona)

[202]

Ground Stones in Ritual Contexts in the Central China Neolithic: Use-Wear Analysis and Residue Analysis of Artifacts in Burials

Burial practices provide important evidence for understanding the social and symbolic connections between the dead and the living. The presentation of artifacts in burials and their functions can provide crucial information of meanings in ritual practices. In this study, I apply use-wear analysis and residue analysis to a sample of grinding stones, sickles, and stone adzes from the early Neolithic burials of the Peiligang site (8000 BP) in North China. The results show that grinding stones were multi-functional tools, used for grinding hard materials and for processing multiple types of plants. Grinding stones recovered from residential refuse pits were used extensively for grinding *Panicoidae* grass, acorns, and tubers. Grinding stones from burials were less extensively used and are more intact, preserving all four feet. Stone sickles are mostly related to harvesting activities, and stone adzes are associated with soil working. Combined with evidence from previous residue analyses of pottery from burials, that show that red rice alcohol was served, this research suggests that tools related specifically to acquisition and processing of plants may have had special symbolic and ritual significance in this early Neolithic context.

Chen, Stephanie [266] see Kress, Yakira

Chen, Wei [51] see Tang, Yiyi

Chen, Yi-lin (University of Otago), Chihhua Chiang (National Taiwan University) and Yi-Chang Liu (National Cheng Kung University)

[51]

Exploring Ancient Foodways: Starch Grain Analysis of Ceramic Residue in Wansan, Yilan County, Taiwan

This research examines starch residues on food related pottery vessels in order to investigate the utilization of various plant foods in the late Neolithic Wansan society. Based on preliminary identifications, most of the residue starch belongs to *Panicoidae*, with definite identification of foxtail millet and Job's tears. No taro or yam have been identified; despite arguably being an important part of early Austronesian horticulture as supported by linguistic reconstructions. The absence of rice starch from Wansan is also perplexing as it has been broadly reported in Taiwanese neolithic sites in various periods and regions. However, more lines of evidence need to be gathered before the lack of rice, taro or yam can be interpreted; their absence in the archaeological record may reflect a real pattern of activity in the past, or could result from either differential preservation, or these species being subjected to alternative ways of processing, cooking or consumption that differ from other plant foods.

Chenault, Mark, Ron Ryden (Independent Researcher) and Michael Stubbing (Jacobs Engineering)

[202]

Prehistoric Hohokam Gridded Fields in the Lower Salt River Valley

Archaeologists working in west Phoenix discovered a complex of prehistoric Hohokam agricultural features consisting of a lateral canal and associated turnouts, sluice gates, field canals, and agricultural field cells in the southeastern portion of AZ T:12:206(ASM) (Site 206). The field cells appear to have dated mainly to the Sacaton phase (AD 950–1150). These are some of the only Hohokam fields ever discovered. A “perfect storm” of preservation had taken place in which flood deposits from the Salt River capped a portion of the field cells and thereby protected and preserved them, burying them deeply enough to avoid the rippers and plows of modern agriculture. This is much like the conditions that led to the preservation of pre-Hohokam, Early Agricultural period (1200 BC–AD 50) fields along the Santa Cruz River in the Tucson Basin. Our focus in this study is on determining how the irrigation system operated and what had been grown in the field cells. The discovery of fields at Site 206 has given archaeologists a glimpse into Hohokam farming practices along the lower Salt River and shown many centuries of continuity in prehistoric farming practices in southern Arizona.

Cheney, Chelsea [219] see Robinson, Erick

Cheng, Jing (Yale University)

[315]

Clay from the Coast: Petrographic Investigations of Xiajiaoshan’s Coastal Hunter-Gatherer Pottery Production in Southern China

Despite extensive research on ceramic production in agricultural societies, ceramic traditions of coastal hunter-fisher-gatherer groups in southern China have been comparatively overlooked. The middle Neolithic site Xiajiaoshan, said to belong to the Xiantouling Culture (dated to 7000 BP), excavated in recent years has yielded abundant intact pottery vessels, offering a unique opportunity to glean the production, distribution, and use of pottery wares by prehistoric coastal communities. Through typological and petrographic analysis, this study compares Xiajiaoshan with other sites in the coastal landscape, investigating Xiajiaoshan occupants’ ceramic production techniques and clay sourcing. By comparing pottery petrographic data across multiple coastal sites, we reconstruct interaction networks among coastal communities and their understanding of the landscape for clay-sourcing. This research illuminates the pottery production capabilities of coastal hunter-fisher-gatherers, enhancing our understanding of prehistoric pottery technology in southern China. More broadly, it could possibly inform interpretations of sociocultural practices and landscape perceptions of other prehistoric coastal communities.

Chesson, Lesley and Gregory Berg (Defense POW/MIA Accounting Agency)

[236]

Theoretical Frameworks for Isotope Data Collection and Interpretation

This presentation describes the theoretical frameworks for isotope data collection and interpretation that will help archaeological scientists ensure their contributions to forensic investigations are scientifically sound and legally defensible. Archaeological science is now commonly used in forensic settings to reconstruct an unknown individual’s life history. One particularly useful technique is stable isotope ratio analysis, which measures the isotopic signatures of human tissues. These signatures reflect variations in diet and drinking water and their interpretation can provide information on the likely origin of an individual since food and water sources are typically geographically linked. However, for the technique to aid investigators, it is essential that the quality and surety of the isotope test results is sufficient to guarantee their reliability for forensic interpretations. This presentation will highlight good practice overlap between archaeological and forensic applications of stable isotope ratio analysis. Topics discussed include quality control metrics for sample preparation and analysis; assessment of meaningful differences when comparing and compiling isotope data; and minimum requirements for reporting isotope test results.

Chesson, Lesley [70] see Maass, Claire
 Chesson, Lesley [337] see Stantis, Chris

Chesson, Meredith (University of Notre Dame), Isaac Ullah (San Diego State University), Paula Lazrus (St John's University), Kostalena Michelaki (Arizona State University) and Giovanni Iriti (Independent Scholar)
[46]

Sustainable Futures in Southern Calabria: Vibrant Communities, Farming Heritage, and Loving the Rural Life
 Small rural towns throughout Italy struggle with declining populations, and many sell houses for extraordinarily little money to lure people to become residents and invest in these communities. The Bova Marina Archaeological Project knows that paying people to move to a hilltop town will not be sufficient to revitalize a community. In our architectural survey of the San Pasquale Valley, a rural community near the town of Bova Marina, we learned that residency provides only one element of a sustainable future. Building sustainable communities requires four key components: (1) making a reliable living to support families; (2) maintaining residency to support a vibrant community; (3) supporting policies and policy makers to provide residents with material and labor resources to protect and manage their local built and natural environments; and (4) some people of the younger generations embracing rural life and seeing a future for themselves in these areas. Our project seeks to contribute toward revitalization efforts in rural Bovese communities by offering our expertise to create heritage tools and nuanced knowledge bases that can empower local residents in their efforts to build a future for themselves and future generations.

Chesson, Meredith [46] see Kuijt, Ian
 Chesson, Meredith [46] see Malone, Gráinne
 Chesson, Meredith [46] see Ullah, Isaac

Chevalier, Alexander [288] see Vrydaghs, Luc

Chiang, Chihhua (National Taiwan University)
[271]

Connecting the Past and the Present: The Kaviyangan Ancestral Pottery Project
 The story begins on September 13, 2015, with a unique and unconventional wedding. This wedding was initiated by an object, the ancestral post, that had been preserved in the National Taiwan University Anthropology Museum for over 80 years. The protagonists of this wedding were the National Taiwan University and the source community of the ancestral post, the Kaviyangan community of the Paiwan tribe. Through this unique wedding, National Taiwan University and the Kaviyangan community established a new relationship. It is their hope that through the establishment of this relationship, they can transform the conundrum created by the colonial history. This marital relationship has now approached its sixth year. Both the Kaviyangan community and National Taiwan University have maintained, strengthened, and transformed this relationship through various activities. This article introduces how archaeology is used to organize and understand the ancestral pottery collected from the chief's house of the old Kaviyangan community. It also delves into how the tribe contemplates the placement of these ancestral "objects" within contemporary contexts, seeking possibilities for their organic continuity in the present. This process further stimulates our deeper research into the "objects" themselves, laying the foundation for sharing more stories about the ancestors.

Chiang, Chihhua [51] see Chen, Yi-lin

Chiba, Yuta [239] see Sugiyama, Saburo

Chicoine, David (Louisiana State University)**[81]***Chair***Chicoine, David (Louisiana State University)****[81]***Huanca Stone and Ancestor Veneration at Cerro San Isidro, Middle Nepeña Valley, Peru*

In the Moro region of the middle Nepeña Valley, on the western slopes of the north-central Peruvian Andes, the fifth century BCE marked a major social crisis, perhaps best seen in endemic armed conflicts, unfinished monumental buildings, and the demise of Chavín-related artistic programs. In this balkanized political landscape, Cerro San Isidro, with its strategic location at the center of the circumscribed Moro Pocket, emerged as one of the most populous and important human centers. This paper summarizes the stratigraphic, radiocarbon, and material evidence recovered at Cerro San Isidro between 2019 and 2022, outlining the broad lines of post-Chavín human occupation and their implications for our understanding of changing forms of social and political arrangements. The site is organized as series of anthropogenic platforms where co-resident groups lived in close proximity. Here, I focus on one of those platforms where our team uncovered and documented a *huanca* stone within an elite residential complex. I interpret this context in light of ancestor veneration practices, emerging social arrangements, and shifting political strategies. More broadly, I explore the cosmological implications of the *huanca*, especially in light of enduring ties with the adjacent highlands.

Chicoine, David [50] see Grávalos, M. Elizabeth

Chicoine, David [286] see Ixta, Itzamara

Chilcote-Fricker, Celise (University of Kentucky)**[157]***Death Knows No Boundaries: Mortuary Patterns and Cross-Cultural Relations of Preconquest Central America*

The characteristics and roles of the preconquest cultures that once existed in Central America have long been the subject of debate, the main focus of which revolves around the nature of their relationships to the surrounding Mesoamerican and Chibchan cultural areas. Largely accepted that no central complex society dominated this area, it has been suggested that there existed multiple “minor” cultures that reflected regional trends and participated in widespread trade networks. Due to the very nature of the universality of death and its prevalence within the archaeological record, patterns in mortuary practices provide an invaluable approach to inferring sociocultural attributes and interpreting cross-cultural relations. A survey of general mortuary patterns from preconquest El Salvador, Honduras, Nicaragua, Costa Rica, and northern Panama are used to delineate regional and temporal patterns for Central America, as well as reflect on areas of interaction, exchange, and influence with the surrounding Mesoamerican and Chibchan cultural areas.

Childs, S. Terry (Retired, Department of the Interior)**[40]***Discussant***Childs, S. Terry (Retired, Department of the Interior)****[297]***Archaeological Collections and Volunteerism*

How are managing and preserving archaeological collections and volunteerism related? I have known Dr. Majewski for about 25 years. Almost all of that time has been when she volunteered to be on various Society for American Archaeology committees that I was also on, wrote articles for journal theme issues I edited, and other activities, all related to improving the curation of collections. Dr. Majewski has been the backbone of educating archaeologists about how and why CRM does what it does with archaeological collections. In the time I've known her, she has enlightened us on how contracting works related to funding collections;

CRM field practices related to no-collection methods; preservation of associated records, both hard copy and digital; orphan collections; and many other issues. This paper will discuss Dr. Majewski's broad expertise on collections as related to her commitment to volunteering, both of which she has impressively demonstrated over her career.

Chinchilla, Oswaldo (Yale University)

[90]

Discussant

Chinchilla, Oswaldo (Yale University)

[128]

Tz'ite and Sib'aq: The Wrong Materials to Create People in the Popol Wuj

Many species of plants are named in the mythical narratives of the Popol Wuj. The sixteenth-century text from the K'iche' of highland Guatemala describes how the gods and the first people used wild and cultivated plants and plant-derived materials in many ways. These narratives convey the cultural significance of plants in rich detail, effectively complementing archaeobotanical data. This includes plants that preserve poorly and are seldom recovered in archaeological contexts but were likely employed widely in ancient Mesoamerican communities. But the interpretation of the poetic K'iche' text is far from straightforward. The writers employed literary images and polysemous words that lend themselves to variable interpretations. In this paper, I examine the meanings associated with the wood of the tz'ite tree (*Erythrina berteroana*) and the fibers obtained from the tul sedge (*Cyperus canus*), known in highland Guatemala as *sib'aq* and by the hispanicized term *cibaque*. A reassessment of the well-known passage of the Popol Wuj, where the gods used these materials to fashion people in a former era, yields potentially significant cultural meanings for these plant-derived materials.

Ching, Eliecer [42] see Mayo, Carlos

Chinique de Armas, Yadira (University of Winnipeg)

[127]

Discussant

Chinique de Armas, Yadira [135] see Naegele, Kathrin

Chiou, Katherine (University of Alabama), Araceli Aguilar-Meléndez (Universidad Veracruzana, Mexico), Christine Hastorf (University of California, Berkeley), Andrés Lira-Noriega (Instituto de Ecología, Mexico) and Emiliano Gallaga (Universidad Autónoma de Chiapas, Mexico)

[217]

Mapping Heat: Pinpointing Early Human Interactions with Chili Pepper in Mexico

Our project investigates the origins and domestication pathways of the Mesoamerican chili pepper (*Capsicum annuum* var. *annuum* L.). Undertaken by an interdisciplinary team and relying on a tripartite methodological framework, this study employs morphometric analyses of extant and archaeological *Capsicum* seeds, ecological niche modeling across a temporal span of 20,000 years, and diachronic geospatial analyses of archaeological sites in contemporary Mexico. These methodologies converge to assist in the identification of potential loci of initial human interaction with the wild progenitor, *C. annuum* var. *glabriusculum* L. The results of this work contribute to the broader discourse on early human-plant interactions, colonization of novel ecosystems, and the complex processes underpinning plant domestication. Moreover, our research approach underscores not only the importance of archaeobotanical analyses but also the utility of integrating diverse skillsets to elucidate the intricate relationship between cultural practices and environmental adaptation.

Chiou, Katherine [202] see Mathu, Patricia
Chiou, Katherine [98] see McGill, Dru

Chirikure, Shadreck [121] see Stephens, Jay

**Chisdock, Cecelia (University of Notre Dame) and Susan Sheridan (University of Notre Dame)
[211]**

Complete and Commingled Juveniles: Comparison and Interpretation

Throughout much of bioarchaeology's history, the remains of juveniles (nonadults) have seen a lack of study. Reasoning ranged from their perceived lack of importance in ancient societies, the complexities of growth and development, and the more fragile nature of their bones. Similarly, commingled remains are less often studied than their more complete counterparts. While it is now widely acknowledged that both juvenile remains and commingled collections have much to contribute to our understanding of the past, studies of commingled juveniles present unique challenges that have led to some hesitancy to pursue them. Using three Byzantine sites from the southern Levant, this paper discusses the importance of commingled juvenile burials for studies of ancient lifeways, particularly personhood, status, and religion. Further, we examine the methodology for incorporating juveniles into more general studies of commingled burials and the limitations and strengths of doing so. We especially focus on facilitating direct comparison between commingled and complete juvenile burials to gain a well-rounded understanding of juvenile life in the past.

Chisdock, Cecelia [68] see Chorek, Sophie

**Chitwood, Anna and Dana Bardolph (Northern Illinois University)
[256]**

Plant Use at Cinnamon Bay, St. John, USVI: A Window into Taíno Ecology and Ritual

This paper presents the analysis of paleoethnobotanical data from excavations at a Classic Taíno site (1000 CE–1490 CE) at Cinnamon Bay, a shoreline ritual site located on St. John in the United States Virgin Islands (USVI). Excavations began in 1992 when it was determined that the site was at risk of being lost to erosion. Until now, there has been no analysis of the paleoethnobotanical samples taken from the site. In the Caribbean, limited macrobotanical studies have been conducted due to concerns about the level of preservation, but previous analyses of soil samples from Taíno habitation sites including Trunk Bay on St. John and the Tutu Village site have provided baseline evidence for what comprised the Taíno diet. Although those analyses are important to our understanding of Taíno domestic economy, there has been a lack of analysis of ritual sites. This paper provides insights into ritualistic plant use by the Taíno that have previously been uninvestigated. We explore potential overlap with dietary resources from domestic habitation sites, including forest resources and agricultural staples, but pay particular attention to how plant use activities were connected with the ceremonial life of the ancient occupants of Cinnamon Bay.

Chitwood, Anna [293] see Bardolph, Dana

Chiu, Hung-Lin [201] see Hermsmeyer, Isabel

Chocktoot, Perry [87] see McDonough, Katelyn

**Choi, Aidan (UCLA)
[285]**

Investigating Ceramic Standardization at Bombon Church, Philippines

This poster presents a preliminary report on the investigation of ceramic standardization at Bombon Church in Camarines Sur, Philippines, spanning different time periods. Bicol is recognized as one of the few regions in the Philippines where year-round extensive wet-rice agriculture was practiced even before the prehispanic era. While agricultural intensification is acknowledged as a key factor driving craft specialization in other parts of the Philippines, various case studies have indicated that foreign contact and colonial pressures can have varying impacts on the organization of ceramic manufacturing and, consequently, standardization. Using ceramic standardization as a proxy indicator of craft specialization, this poster presentation delves into the possibility of identifying changes in standardization over time among the ceramics found at Bombon Church, Camarines Sur. Additionally, it seeks to determine whether these trends indicate shifts in craft production practices. To assess the degree of morphological standardization of earthenware ceramics at Bombon Church, we carefully selected ceramic rim sherds from the site's assemblage for thorough morphological analysis. Subsequently, we utilized statistical analysis to examine measurements related to the physical characteristics of these sherds, aiming to pinpoint changes in the level of standardization within the assemblage across different time periods.

Choi, MinJoo [287] see Johnson, Rachel

Choperena-Tous, Luis Carlos [118] see Campos Quintero, Lina

Chorek, Sophie (University of Notre Dame), Cecelia Chisdock (University of Notre Dame), Keri Porter (University of Notre Dame) and Susan Sheridan (University of Notre Dame) [68]

A Reevaluation of Cribra Orbitalia at Early Bronze Age Bab adh-Dhra'

Individuals at Early Bronze Age Bab adh-Dhra' (located in modern Jordan) lived in densely populated, walled towns, which led to increased physiological stress. Cribra orbitalia, likely resulting from nutritional deficiency, was used as a measure of such stress. A new method of assessing cribra orbitalia using a Bone Porous Lesion Evaluation (BoPLE) form categorizes severity and healing scales, lesion area, and pits present in a 1 cm² area. Other pathological lesions like cranial depressed fractures are prevalent on Bab adh-Dhra' individuals, representing a time period of increased interpersonal violence. A comparative study of both cribra orbitalia and cranial depressed fractures could identify a correlation between those experiencing malnutrition and those experiencing violence. This study reevaluates cribra orbitalia on complete crania of Bab adh-Dhra' individuals, to assess how this new standard might enhance studies of stress and violence at Bab adh-Dhra'.

Chovanec, Zuzana (USACE, Jacksonville District) and Meredith Moreno (USACE, Jacksonville District) [269]

Planning for the Inevitable: Climate Change, Cultural Resources, and Coastal Cities in the American Southeast

Risks of flooding and damage associated with climate change can be extensive and devastating, with potential impacts covering multiple domains (health/safety, infrastructure, economic, natural and cultural resources) and extending over substantial areas. Mitigation efforts are complex, costly, and may be controversial. Historic coastal cities, with substantial cultural resources located above and below ground, face unique challenges in planning for a seemingly inevitable scenario with few options. In that sense, large-scale projects that aim to develop strategies for the mitigation of such risks may present opportunities for the long-term preservation of cultural resources in such settings. Challenges faced, lessons learned and future approaches are presented for two southeastern American coastal cities: Charleston, South Carolina, and St. Augustine, Florida.

Christakopoulou, Olga [170] see Simoni, Eleni

Christensen, Villy [87] see Efford, Meaghan

Christenson, Allen (Brigham Young University)

[128]

“These, therefore, are our roots, our existence”: *Ancestral Roots as the Embodiment of Identity in K’iche’ Maya Society*
In the *Title of Totonicapán*, a sixteenth-century K’iche’ Maya text, the authors declare that the founders of their royal lineage were the “roots” from which they grew and were nourished, as a maize plant draws its sustenance from its roots: “These, therefore, are our roots, our existence” (Christenson 2022:87). In this passage, roots are not merely the source of their bloodline, but of their very existence. When migrating from one locale to another, the text notes that they “brought the roots of trees and the roots of bushes” (Christenson 2022:97). These “roots” serve as a metaphor for the people themselves. In early highland Maya texts, founding ancestors are consistently described as roots, an essential part of a plant that cannot be severed away from the living plant without destroying it. As a Tz’utujil Maya colleague once told me: “As the old people say, when the Spaniards came, they broke off the branches of our world. They even burned the trunk. But the roots remain and they can never reach the roots. We will never die because the roots have power. We draw strength from our ancestors.”

Christie, Jessica (East Carolina University)

[124]

Discussant

[124]

Chair

Christie, Jessica (East Carolina University)

[331]

Reconsidering the Role of Archaeology in Shaping “Affective Places”: *Case Scenarios from Hawai’i and Yucatán*

Western-trained scholars like to take for granted that the discipline of archaeology plays a foundational role in providing data from ancient sites from which scientists reconstruct histories, social organization, and what drew people to such places. Government institutions use such information to assign values to cultural places in the context of heritage management, which typically translate into eligibility for preservation funding. I will present two case scenarios of potent ancient sites with material vestiges which Indigenous people have reconstructed on multiple levels and with whom they practice active agentive relationships. Archaeology plays a minimal role or is not wanted. One is the famous chiefly birthplace Kukaniloko on O’ahu island, Hawai’i, and the other are the many muul or stone mounds in the Yucatec Maya landscape. Although local histories and cultural issues are completely different, both question the need for archaeology. I open discussions of how Indigenous and Western ways of knowing (archaeology) might come together so that we learn how to apply lessons from both systems to help shape a regenerative future.

Christie, Shaheen (American InterContinental University) and Eava Snodden (St. Mary’s University)

[105]

Student Mentorship and Reflections of Service on DPAA Recovery Projects

Archaeological recovery of missing service personnel on conflict landscapes have increased since 2015 through strategic partnerships between the Defense POW/MIA Accounting Agency (DPAA) and volunteer organizations, heritage and cultural resource management (CRM) businesses, and universities. Such partnerships result in the sharing of methodologies and innovative technologies that are adapted and implemented at incident-related sites. Team members with varying levels of experience in field recoveries are offered opportunities to train in specific archaeological methods related to the DPAA. Partnership projects operating as academic field schools or commercial-style projects expose early career archaeologists, as well as veterans or other volunteers, to different learning opportunities through adaptive and strategic

cooperation while on site. As a result, supervisors and assistants collaborate to teach archaeological field methods, discuss recovery challenges, and receive crucial mentorship throughout the project from experienced professionals. Collaboration between project participants from multiple countries increases the social value and educational potential of DPAA projects and fosters invaluable cross-cultural experiences for foreign students, volunteers, and professionals engaged in US-funded and directed projects. In addition, such collaborations may result in the establishment of similar organizations in foreign countries focused on the recovery of their own unaccounted MIA service members.

Chu, Alejandro [193] see Nuñez, Jose

Chunag, Amartuvshin [256] see Carolus, Christina

Church, Gloria (University of Louisiana at Lafayette), Erlend Johnson (University of Louisiana, Lafayette) and Mark Rees (University of Louisiana, Lafayette)
[104]

Post Molds in the Forest: A Preliminary Report on Site 16VN3504

Data recovery excavations were conducted in the summer of 2023 at two sites in Vernon Parish, Louisiana, as part of hurricane recovery efforts in the Calcasieu Ranger District of Kisatchie National Forest. This poster presents preliminary results from 16VN3504, a multicomponent site along Drakes Creek. Excavation of Test Pit I revealed five possible post molds and associated cultural features. These post molds may represent one of the first archaeologically recorded permanent or semipermanent precontact structures in the region, potentially modifying long-held interpretations of precontact Native American lifeways in this part of western Louisiana. Information is presented on the dimensions and physical characteristics of these post molds and features, along with interpretations of their age, archaeological integrity, disturbances, and associated artifacts. Diagnostic artifacts from Test Pit I include a San Patrice point and whiteware ceramics. The dating of the structural feature requires an interpretation of disturbances.

Church, Lynn, Rick Knecht (Nalaquq), Warren Jones (Qanirtuuq) and Sean Gleason (Nalaquq)
[150]

The Nunalleq Project: Yup'ik Heritage and Community-Based Archaeology in Quinhagak, Alaska

The Nunalleq Project was initiated by the leaders of Qanirtuuq Inc., the ANCSA Village Corporation representing the Yup'ik village of Quinhagak, Alaska. The project was intended to address two locally identified needs: to recover as many artifacts as possible from a rapidly eroding archaeological site and to reconnect young people to Yup'ik traditions. The Nunalleq Project has just completed its fourteenth year with results and impact that have far exceeded any of our early expectations. This paper describes how this long-term collaboration has evolved and continues to benefit both local and outside stakeholders.

Church, Lynn [150] see Lim, Jonathan

Churney, Abbey [44] see Lovett, Korrin

Cienciosi, Alessandra (University of Amsterdam; Stanford University)
[245]

Resilience and Vulnerability of Small African Islands

While often forgotten, there are small African islands that played a crucial role in modern history and have often forgotten stories to tell about the impact of colonialism and the diaspora of enslaved and indentured workers. Their role emerged with the emergence of epidemic diseases and the need to manage the health

risks involving thousands of people forcibly or voluntarily moved around the continent. This paper highlights some case studies of small islands used as quarantine stations, leper colonies, and prisons between the eighteenth and the twentieth centuries on the east coast of Africa, i.e., the Indian Ocean. In their small size, these sites encapsulate the drastic environmental change undergone by previously uninhabited islands and, archaeologically, are exemplars of the built landscape created by colonizers for sanitary purposes. The history of these sites, though chronologically short, has profoundly marked the experience of thousands of migrants and marginalized communities and played a role in shaping new sea routes and interconnections with the mainland. In addition, some of these sites have recently been reconfigured as nature reserves for some endangered species, questioning our ability to reconcile archaeological research and environmental protection.

Cifuentes Nava, Gerardo [252] see Pacheco Arias, Leobardo

Cinquino, Michael [244] see Hayward, Michele

Ciolek-Torello, Richard (Statistical Research Inc.), Donn Grenda (Statistical Research Inc.) and Patrick Stanton (Statistical Research Inc.)
[272]

Assimilation, Acculturation, and Individual Agency in a Coastal Gabrielino Village

Ethnohistoric accounts suggest that the Gabrielino were a complex hunter-gatherer society similar to their Chumash neighbors. They had a rich and elaborate material culture and a ranked society with a chiefly class. Building on previous research on Chumash burial grounds, we report the results of an intensive multiyear study of a Gabrielino village and burial ground that was utilized for hundreds of years in west Los Angeles. An examination of changing mortuary treatments and associated artifacts reveals that high-status social classes or roles developed in coastal Gabrielino society in the late Mission period with little evidence for social differentiation prior to that time. We argue that the emergence of status and role differentiation is one of several responses by the Gabrielino to both the adverse conditions and opportunities presented by colonial contact with Spanish missionaries and ranchers, and the environmental changes they wrought.

Ciomek, Katarzyna [156] see Palonka, Radoslaw

Cipolla, Craig, James Quinn (Mohegan Tribal Historic Preservation Office) and Jay Levy (Mohegan Tribal Historic Preservation Office)
[258]

“An Acre of Land to Plant or A Stick of Wood to Make a Fence or Fire”: A Heritage of Mohegan Allotment
Allotment was a world-changing institution that forever altered the course of North American history; through this process, Indigenous lands were broken up into lots, “owned” by individuals and families rather than collectively held. Allotment placed an unprecedented amount of stress on Indigenous traditions of subsistence, social relations, political organization, and more. A strikingly limited amount of archaeological attention has been placed on studying histories of allotment and their aftermaths, nor are these subjects traditionally discussed in terms of heritage. In this paper we take a pragmatic view, thinking through the differences that a “heritage of allotment” makes in the wider world. We consider allotment of Mohegan lands in southeastern Connecticut (USA). An archaeology of Mohegan allotment speaks to an enduring and long-term Indigenous presence, to the challenges faced and overcome by Mohegan peoples living through, and with, settler colonialism, and to the nuances of Indigenous-colonial archaeological records. The paper emphasizes the importance of Indigenous and collaborative archaeologies for shedding new light on these challenging but important archaeological traces, while also exploring how a heritage of allotment pushes back against the Eurocentric and colonial vantages through which Indigenous history is often framed.

Cipolla, Craig [99] see Levy, Jay

Claeys, Philippe [334] see Spros, Rachel

Clare, Lee [25] see Gresky, Julia

Clark, Alexis (Advisory Council on Historic Preservation)

[67]

Reenvisioning “Zero Waste Archaeology”

As archaeologists, we have a heightened awareness that the objects we discard in our daily lives persist and tell a story about contemporary society. But do we give enough consideration to the items we discard through the process of archaeological research? In 2012, an article published in the SAA Archaeological Record titled “Zero Waste Archaeology” pointed out various ways that archaeologists could reduce the negative ecological impact of their research. Over a decade later, many of these suggestions have become common practice for most as sustainability has increased in importance and necessity in our personal and professional lives. Practices of present interest, including the reduction of fossil fuel consumption, avoidance of single-use plastics, and participation in the circular economy, are given brief, if any consideration. In this poster, I revisit the idea of “zero waste archaeology” for this decade, in light of current sustainability research and trends.

Clark, Amy (Harvard University) and Danielle Macdonald (University of Tulsa)

[129]

“Us the Hunters”: Evaluating Shifting Gender Dynamics of North American Paleolithic Researchers and Scholarship

The number of women in Paleolithic archaeology has increased over the last 30 years, following the trend in the field in general. In the United States and Canada, the number of men and women in tenure track positions is nearly equivalent, yet this equality masks considerable imbalance when considering the seniority of these professors. Male professors are more likely to be in positions of power in their institutions but are also more likely to be seen as leaders in the field and to be perceived as the voices of Paleolithic archaeology. This last point is starkly expressed when viewing the representation of human origins “experts” in the public media. As a result, the way that gender roles and dynamics are interpreted in the Paleolithic archaeological record is often perceived through an androcentric bias. In this paper, we evaluate the changing demographics of Paleolithic archaeology researchers, assessing whether these changes impact how Paleolithic gender is interpreted in scholarship and by the public.

Clark, Andrew (State Historical Society of North Dakota), Andrew Robinson (State Historical Society of North Dakota), Margaret Patton (State Historical Society of North Dakota) and Timothy Reed (State Historical Society of North Dakota)

[150]

Public Archaeology and Geophysical Survey of a Cemetery in North Dakota

The State Historical Society of North Dakota (SHSND) recently acquired a suite of geophysical survey equipment in preparation for collaboration with the Turtle Mountain Band of Chippewa and Spirit Lake Nation. At the same time, a small community cemetery contacted the SHSND for information on locating unmarked burials, as the descendant community research indicated that the Logan Center Cemetery in Grand Forks County, North Dakota, contained numerous unmarked graves. Partnering with the cemetery caretakers, the Society’s Department of Archaeology and Historic Preservation conducted a multisensor remote sensing survey, including GPR, electric resistivity, and color and infrared drone surveys. Field crews included SHSND staff, local community members, and Turtle Mountain Band of Chippewa staff. The project garnered immense interest from family members who traveled to observe the fieldwork, including some

driving from multiple states away to learn about and see the process. This presentation discusses the public aspect and the geophysical findings of this survey.

Clark, Bonnie (University of Denver)

[303]

Chair

Clark, Bonnie (University of Denver), April Kamp-Whittaker (California State University, Chico), Steven Sharpe (Purdue University) and Greg Kitajima (Aesthetic Pruner)

[303]

Shades of Confinement: Collaborative Study of a Historic Treescape at Amache National Historic Site

Trees—whether planted, pruned, or left to grow in their natural setting—can provide detailed evidence about intention, expertise, and aesthetics of the people who planted or lived among them. This paper overviews the methodologies employed and research findings of scholars studying the trees of Amache, Colorado's World War II-era Japanese American incarceration camp. A primary strategy for making their prisonscape more habitable, incarcerated prisoners planted thousands of trees at Amache and many still exist on-site. High-resolution drone imagery has made mapping these trees much more streamlined and reveals important neighborhood-level patterning. At Amache this broader scale data has been combined with GPR, excavations, and analysis of individual trees deepened through engagement with community members, including experts in traditional plant care. This holistic approach provides a fine-grained view of these critical, often living, heritage resources.

Clark, Brian (Hobart & William Smith)

[95]

Chair

Clark, Brian (Hobart & William Smith)

[95]

Ethnoarchaeological Pottery Traditions in North Wollo, Ethiopia

This paper will review the ethnoarchaeological context of ceramic production in North Wollo, Ethiopia, and trace changes to ceramic traditions influenced by sociopolitical factors, with implications for archaeological reconnaissance and research. This research is a part of the broader Solomonic-Zagwe Encounters Project and its ongoing efforts to, in part, reevaluate pottery from the post-Askumite period. Much of the pottery analyses from northern Ethiopia have followed a simple typological model of vessel form and color. Often, this has been a descriptive exercise with little interpretation of broader archaeological significance. Ethnographic research of contemporary pottery production, almost exclusively in the Tigray region, however, has been more robust, correlating attributes like temper to geographical origins and technical and social factors. This paper presents complimentary research from Gannata Maryam in the Zagwe Dynasty heartland. The research highlights how twentieth-century politics influenced pottery production with implications for current field surveying, how local potters view technical choices like temper, and describes rarely recognized potting techniques. All these aspects contribute to more meaningfully engaging with pottery as an archaeological resource in post-Aksumite Ethiopia.

Clark, Emily (Tulane University)

[279]

Detecting the Path: The Usefulness of Lidar in the Upper Central Tombigbee River Valley

Over the past few decades, lidar has been used to reveal the extent and complexity of cultural landscapes in different world areas. The Mississippi period (AD 1000–1550) is poorly understood in the Upper Central Tombigbee River Valley, especially as a broader Mississippian understanding of these settlement data come from Tennessee-Tombigbee Waterway surveys and excavations of the 1970s. This paper compares the ability

and limitations of lidar in the Upper Central Tombigbee Valley, first by testing against reported Mississippian sites in the region, then by considering the possibility to pair lidar with Indigenous knowledges in north-central Mississippi. By braiding together new settlement data, Indigenous knowledges, and current technology, we can detect the paths of the past, contextualizing a multidimensional landscape through a variety of lenses.

Clark, Geoffrey (Arizona State University)

[162]

SPD Analysis Sheds Light on North Spanish Mesolithic Demography

Summed probability distributions of radiocarbon dates (SPD curves) have become an increasingly popular tool with which to reconstruct prehistoric population dynamics. They are used here to test models of demographic change using Mesolithic data from Cantabria and the middle Ebro valley. Local, regional, and global models are compared. Results show a consistency of pattern, regardless of scale and the shape of the null model, when the Ebro dates are compared with those of Cantabria. In each comparison there is an inverse relationship between central Cantabria and the Middle Ebro. As Cantabria loses population, the Middle Ebro gains it. Cantabria shows a significant increase in population that peaks at 7.7–7.8 ka cal BP, followed by a decline that continues well into the early Neolithic. The middle Ebro shows a long negative deviation between ca. 12–10 ka cal BP, suggesting the region was unoccupied until the late Upper Paleolithic. This is followed by a long positive trend that attains statistical significance at ca. 7.4 ka cal BP, with maximum population density at 7.1–7.0 ka cal BP, some 700–800 years after the Cantabrian peak, perhaps explaining the near abandonment of Cantabria following the Mesolithic.

Clark, Geoffrey [155] see Parton, Phillip

Clark, Jeffery [52] see Smith, Jaye

Clark, Jillian [68] see Giblin, Julia

Clark, Julia [199] see Densel, Allison

Clark, Julia [151] see Ventresca-Miller, Alicia

Clark, Morgan (Brown University)

[90]

Why Do Pictures Speak? Orality in Maya Hieroglyphic Writing

This paper investigates the relationship between Classic Maya text, imagery, and genre when quoted speech is introduced. Quotes can be attributed to speakers through “speech scrolls,” the quotative evidential particle, or the verb meaning “say.” When the latter two are used, they are followed by the name of the speaker and sometimes the addressee. These kinds of attributions appear more commonly on ceramics than on monuments, and when these attributions do occur on monuments, they rarely appear as the speech verb. The usage of the speech verb primarily on ceramics, especially those portraying mythohistorical narratives, suggests that its appearance may be generically bound. Texts that include the speech verb are often thematically related and temporally and regionally limited. They are connected to a few historical actors—owners and scribes—named in rim texts. The way scribes represented speech in these narrative contexts was likely meant to foster a greater connection between their patrons and the mythohistorical heroes of their stories for a significant political aim. By creating these connections and even claiming to know the spoken words of supernaturals, historical actors could impress their esoteric knowledge upon their subjects by boasting access to an oral tradition passed down from the supernatural world.

Clarkson, Chris [217] see Florin, S. Anna

Clarkson, Persis [156] see Valenzuela, Daniela

Clasby, Ryan (University of Illinois, Urbana-Champaign)
[161]

Real Roads and Imaginary Borders: Exploring Northern and Central Andean Cultural Trajectories and Interactions from the Perspective of the Ceja de Selva during the First Millennium BCE

The border between Peru and Ecuador has often been viewed heuristically as a boundary between the cultures of the Northern and Central Andes, particularly by the second of half of the first millennium BCE when the historical trajectory of the two culture areas appears to diverge into two separate paths. Nevertheless, recent research from the ceja de selva of the eastern half of the Transitional Zone between the Northern and Central Andes indicates a considerably more complicated picture, one that is suggestive of both shifting cultural boundaries as well as continued cultural interactions. In this paper, I use recent evidence from the site of Huayurco to argue that cultures living in Peru's northern ceja de selva actually strengthened their relationship with societies living in Ecuador during the latter half of the first millennium BCE, a trend that would continue into the subsequent first millennium AD, likely in order to maintain access to certain types of products used for ritual paraphernalia. The evidence from this paper reinforces the idea that the Northern and Central Andes were not separated by a hard border but rather shifting cultural frontiers that contributed to the cultural trajectories of both regions.

Clasby, Ryan [287] see Johnson, Rachel

Clavo Cruz, Alex [13] see Koons, Michele

Clavo Cruz, Alex [13] see Sánchez, Blanca

Clay, Elizabeth (Central Connecticut State University)
[89]

Basement Curation: Adopting an Orphaned Collection from Montserrat

The Galways Plantation collection, consisting of 28 boxes of artifacts excavated on Montserrat during the 1980s, was temporarily on loan in the United States when the Soufrière Hills Volcano erupted in July 1995. This catastrophic event led to the creation of an exclusion zone covering two-thirds of the island that remains officially unoccupied to this day. In addition to the loss of life, land, and livelihoods, the disaster destroyed archaeological sites—including Galways—and threw the cultural heritage administration into chaos. The Galways collection has now been off-island for over 25 years because, notwithstanding the aftermath of the eruption, the island does not currently have the capacity to curate the collection, which is a systemic issue throughout the Caribbean. Climate change, political instability, and lack of resources mean that many archaeological collections eventually find homes far from their sites and communities of origin. In fall 2023, the Galways materials will move from New Jersey to Central Connecticut State University in New Britain, CT, where they will be digitized into DAACS and used for teaching. Unpacking these boxes, and their history, will involve accounting for their past and present storage conditions as entangled sites of curation.

Clay, R. Berle [24] see Greenlee, Diana

Clay, R. Berle [283] see Hargrave, Michael

Claypatch, Hunter (Binghamton University; Desert Archaeology)**[75]***Understanding La Playa through 2,000 Years of Ceramic Production and Exchange*

Ceramics blanket La Playa's vast landscape and include some of the earliest pottery produced in the Southwest/Northwest. Despite its high frequency and value for reconstructing occupational histories, there has been no synthetic discussion of La Playa's ceramics. This presentation chronologically frames the site's 2,000 years ceramic presence by exploring questions of nascent pottery production, distribution of trade wares, and regional precolonial ceramic variability. The value of La Playa's ceramics is particularly important for reconstructing Trincheras tradition chronology (~400–1450 CE) and has recently contributed to the first seriation of its ceramics. This seriation demonstrates that a locally produced ceramic type, La Playa Purple-on-brown, was among the earliest decorated ceramics produced in the Southwest/Northwest and served as a progenitor for over eight centuries of local decorated pottery production.

Clayton, Sarah (University of Wisconsin, Madison)**[11]***Discussant***Clayton, Sarah (University of Wisconsin, Madison) and Angela Huster (PaleoWest)****[214]***Ritual, Material Culture, and Interaction in the Epiclassic Basin of Mexico: Contextualizing a Temple Assemblage from Chicoloapan*

Central Mexico's Epiclassic period (550–850 CE) was a time of significant social change, marked by the breakdown of the Teotihuacan state, political fragmentation, the migration of large numbers of people, and the adoption of new practices and institutions. In the Basin of Mexico, macroscale shifts in regional settlement are well documented, including the formation and growth of settlements that persisted for multiple centuries. Less is known, however, about the everyday lives, changing practices, and interactions among people living across the region during this time. In this paper, we examine community-scale ritual and associated material culture at Chicoloapan, a large settlement in the southern Basin that flourished after Teotihuacan's decline. We present an analysis of artifacts and features associated with a temple complex at Chicoloapan and consider the activities that took place in civic-ceremonial spaces among Epiclassic communities in this area. The assemblage includes diverse objects, from censers to musical instruments, that represent the material traces of events and interactions that shaped social relations, power structures, and concepts of identity among residents. This research sheds light on the internal dynamics of an Epiclassic community and examines shifting local practices and material culture within the broader context of regional sociopolitical change.

Clayton, Sarah [218] see Cruz Jimenez, Ricardo

Cleary Moungey, Megan**[181]***Discussant***Clinker, Susannah****[168]***Sewing Hope: Embracing Traditional Knowledge and Crafts through Gut Sewing*

Gut-sewing technology was utilized by Inuit communities until the early twentieth century. Despite gut-sewing being a successful and advantageous technology for thousands of years, it is scarcely practiced today. This is in part due to the availability of synthetic materials but also because these kinds of traditional practices have been lost over generations due to the forced displacement of Indigenous people, Residential school systems, and federal laws restricting traditional hunting practices. In recent years, however, many Indigenous communities have attempted to reestablish and renew these kinds of cultural practices and traditional

techniques, including gut sewing. This is typically done by bringing together Elders and knowledge holders with members of the community and the general public. For example, the Smithsonian Arctic Studies Center in Alaska brought together three Indigenous artists in 2014: Mary Tunuchuk (Yup'ik), Elaine Kingeekuk (St. Lawrence Island Yupik), and Sonya Kelliher-Combs (Iñupiaq-Athabaskan) to study historic gutskin objects and to teach community members this traditional skill. This presentation will outline my experience trying gut-sewing and will reflect on how community-based projects that teach these kinds of traditional skills can be valuable experiences for archaeologists to immerse themselves into the social aspects of the technological process alongside community members.

Clinton, Carter

[7]

Lift Every Voice: Ethical Imperatives in Community-Led Bioarchaeology

This presentation focuses on redefining ethical frameworks in bioarchaeology and anthropological genetics, particularly when working with African American communities. Utilizing a “shared authority” approach, the talk argues for the community’s role as not merely subjects but active collaborators and decision-makers. Case studies from the historic New York African Burial Ground and other unidentified sites in North Carolina, and South Carolina serve to advocate for an ethical paradigm shift toward community-centric research. This shift aims to create mutual benefits: empowerment and ownership for communities over their ancestral narratives and a more nuanced understanding for researchers. The goals are twofold: to decolonize bioarchaeological practices by authentically incorporating African American perspectives and to advance restorative justice by recalibrating how knowledge is generated and shared. This community-focused approach fosters empowerment and ownership within African American communities over their past. By doing so, it creates a more ethical and equitable landscape for research, celebrating African American heritage. Finally, we call for an ethical reevaluation in academic practices, offering a blueprint for a more respectful, inclusive, and responsible future in bioarchaeological and anthropological genetic research.

Cmielewski, Bartłomiej [242] see Sieczkowska, Dominika

Coats, Isobel (University of New Mexico)

[284]

A Model Melting Pot? Interrogating Hybridity and Ethnogenesis in Colonial Ceramic Production at Comanche Springs, New Mexico

Located in the foothills of the Manzano Mountains in southeastern New Mexico, the site of Comanche Springs has been an object of research and excavation spanning five decades. However, the social fabric of the people who once occupied this seventeenth-century colonial settlement remain unclear. Was this relatively isolated population an exemplary “hybrid” community foreshadowing the unique melting pot of contemporary New Mexico? To answer this question, I conducted an in-depth analysis of the Comanche Springs ceramic assemblage according to type, form, temper, design, and firing process. This research elucidated the involvement and influences of both Spanish and Indigenous residents in the production processes and eventual use of ceramic vessels. Characteristics of hybridity and ethnogenesis present in the assemblage indicate that Spanish settlers at Comanche Springs were clearly intertwined with—and perhaps even dependent on—local Indigenous populations for knowledge and survival on the colonial frontier.

Coats, Isobel [41] see LaMartina, Emma

Coats, Waylon [197] see Cobb, Emilie

Coats, Waylon [99] see Pryor, John

Cobb, Charles [287] see Farace, Anthony

Cobb, Charles [279] see Krus, Anthony

Cobb, Emilie (University of California, Merced), Manuel Duenas-Garcia (University of California, Merced), Waylon Coats (Southern Sierra Miwuk Nation), Miriam Campos Martinez (University of California, Merced) and Scott Nicolay (University of California, Merced)
[197]

Capturing Time: 3D Preservation of California Central Valley Rock Art for Future Generations

The preservation of cultural heritage through advanced technology allows us to understand and protect the past for future generations. This poster presents the Rock Art Heritage Preservation Project, a project aimed at digitally conserving the legacy of California Central Valley's rock art with the Southern Sierra Miwuk Nation. California's landscape harbors invaluable cultural heritage, such as rock art sites, many of which remain undocumented due to limited accessibility and private ownership. These petroglyphs and pictographs reflect Indigenous artistic expression and culture; however, these sites are at risk of natural erosion and vandalism, highlighting the urgency of their preservation. The project, centered in Merced and Mariposa counties, uses recording techniques like lidar, photogrammetry, and structured light scanning. This initiative not only encourages the digital documentation of these culturally significant sites but also increases their accessibility for both researchers and Indigenous groups. By employing these advanced methods, the Rock Art Heritage Preservation Project strives to offer an immersive experience that bridges the past and present. This undertaking emphasizes the integration of technology and cultural stewardship, ensuring that rock art sites endure as a testament to Indigenous creativity and culture.

Cobb, Hannah (University of Manchester, UK)

[147]

Discussant

[147]

Chair

Cobb, Hannah (University of Manchester, UK)

[147]

The Transformative Power of Learning Assemblages, Relational Pedagogies, and Universal Design for Learning in Archaeology

In our collaborative work, Karina Croucher and I have developed a pedagogy that we have called an inclusive learning assemblage approach (Cobb and Croucher 2020). We have argued that archaeology is powerfully placed to deliver teaching and learning that foregrounds the lived experiences of our students and their relationships with humans and nonhumans alike, bringing these into conversation with the past, present, and future. In contrast to banking, instrumentalist, or “chalk and talk” models of teaching and learning; our approach follows hooks (1994) in advocating methods that teach to transgress, and in turn this has the potential to transform the archaeologies that our students will produce in the future. But what does this look like in practice when we are constrained by the day-to-day requirements of our universities? How can we resist and challenge these while foregrounding our student’s diversity? In this paper I turn to the concept of Universal Design for Learning, which aims to accommodate the needs of all learners, in order to work through how principles of inclusive learning assemblages can be realized in assessment practices and beyond.

Cobo Sánchez, Lucía (ICArEHB) and João Cascalheira (ICArEHB)

[199]

Neanderthal and Carnivore Interplay at Escoural Cave: Preliminary Evidence from the Archaeofaunal and Spatial Analysis of Two New Test Pits

The Escoural Cave (Portugal) represents a key window into Neanderthal-carnivore interactions during the Middle Paleolithic. Excavations in the 1960s and 1990s unearthed abundant archaeological findings, including

Neolithic burial grounds, cave art and Upper and Middle Paleolithic remains. The Middle Paleolithic layers are characterized by abundant quartz industries and faunal remains. U-Th dating suggests an age of approximately 48 ka. This research presents the results of a zooarchaeological and taphonomic analysis of the fauna recovered from two recently excavated test pits—outside and inside the cave. Additionally, spatial analysis on the vertical axis was employed to discern Neanderthal and carnivore occupations. Preliminary findings suggest that both Neanderthals and carnivores contributed to the accumulation of remains, but that Neanderthal visits were sporadic. While human and carnivore alterations seem intermixed in the vertical section, there is no current evidence indicating overlap or scavenging events between the two. The complexity of the cave system, site formation processes, and the unknown connection between external and internal cave sediments challenge our understanding of the interactions between Neanderthals and carnivores, underscoring the importance of reexamining previous finds and undertaking new excavations. This study sets the foundation for future research, anticipating deeper insights into prehistoric dynamics.

Coburn, James

[271]

Continental Connections: Development of the Yayoi People

The Korean Peninsula and Japanese Archipelago have been intimately connected in many ways since the beginning of the peopling of both regions. However, the Mumun (Bronze age) period of the Korean Peninsula witnessed the most impactful interactions between the two groups. During this period the Jomon people of Japan and Samhan people of Korea started exchanging more than simple trade goods. This is evident in the archaeological materials found in both regions. This paper will look specifically at the exchange of material culture and ideas such as Bronze AFOs and ceramics coming into the Japanese archipelago. In addition, it will discuss the development of burial mounds and how continental connections helped to develop this custom. It will detail the significant role that the Mumun pottery and bronze dagger traditions played on the developing Japanese culture. It will also question the idea that the cultural exchange occurred only in one direction as some scholars have suggested.

Cochran, Lindsey (East Tennessee State University), Grant Snitker (Center for Applied Fire and Ecosystem Science) and K. C. Jones

[82]

Creating Machine-Learning Models Using Historical Maps to Identify the Places In-Between

Historical archaeology lies at the intersection of the written word, the spoken word, and material things. We extend and enhance that purview by incorporating machine-learning algorithms to create more dynamic assessments of places documented on historical maps, thus engaging more deeply with sociocultural and environmental perspectives embedded in a multiscalar historical past. By creating hybridized data sources to create more dynamic collections of information, we are able to take advantage of inherent “unknowns” in traditionally utilized data sources to identify probable locations of past human activity. Embedding the in-between spaces in our model of historic coastal plantation spaces allows us to more fully engage with theory building of liminal, disenfranchised spaces and places using a broader synthesis of the processual culture history building inherent in southeastern archaeology while also engaging with the so-called “ontological turn.” Ultimately, we propose that by identifying the locations of places ignored or unknown by archaeologists, as well as highlighting the areas within which many community-building activities took place, we can create a system to identify and protect important cultural heritage resources that are at risk due to the climate emergency.

Cochran, Lindsey [283] see Kipp, Ashley

Cochran, Lindsey [104] see Ritchison, Brandon

Cochrane, Ethan [3] see Constantino Perez, Glauco

Coco, Emily (New York University) and Denné Reed (University of Texas, Austin)
[308]

Paleo Core: A Conceptual Framework for Integrating Paleontological, Archaeological, and Geological Data

Data sharing, integration, and synthesis remain elusive goals for paleoanthropological and archaeological research into human biological and cultural origins, which relies on fossils, artifacts, and geological specimens collected by diverse, independent research teams. Integrating find data across these efforts is an acknowledged but as yet unachieved goal. Part of the challenge is the heterogeneous nature of the collected data as well as the lack of shared conceptual frameworks and standards for sharing information. A shared framework supports integration and synthesis of primary data across sites and teams by specifying the relationships between notional entities fundamental to paleoanthropological and archaeological research. Here, we present a modular, extensible conceptual framework for recording and sharing paleoanthropological and archaeological data, developed from an assessment of existing data dictionaries from a diverse set of projects. We also provide concrete examples of data standard implementation in paleoanthropology and archaeology to demonstrate the benefits of adopting such a framework.

Codding, Brian [249] see Cole, Kasey

Codding, Brian [198] see Medina, Ishmael

Codlin, Maria (University of Turin), Lisa Yeomans (University of Copenhagen) and Beatrice Demarchi (University of Turin)
[12]

Identification of Avian Bone and Eggshell to Reveal Seasonal Foods from Ancient Wetlands

Wetlands provide a huge abundance and diversity of foods from aquatic plants and animals, many of which don't survive archaeologically. Those that do, such as the bones and eggs of aquatic birds, are often underutilized in archaeological interpretations due to the difficulty of their recovery and taxonomic identification. Yet avifaunal remains from aquatic species can provide a wealth of information on wetland health and productivity, presence of co-occurring organisms and harvesting of food items, alongside contextual information about seasonally available foods. Recent research has demonstrated the utility of proteomic techniques for identifying fragmentary avifauna from archaeological sites, including proteins within the mineral matrix of eggshells which can survive far longer than proteins can survive within animal bones. We present new research from the ArchaeoBiomics laboratory at the University of Turin, Italy, where we are refining the methodologies to extract proteins from eggshells and expanding reference libraries to improve the taxonomic resolution for identification of both avian bone and eggs. We also consider whether protein degradation can be used to identify markers of cooking in eggshells and apply these techniques to examine seasonal wetland exploitation and cooking within the context of a late Pleistocene to Holocene transitional site in Southwest Asia.

Coffey, Jacob [41] see Mink, Philip

Cohen, Anna [275] see Cannon, Molly

Cohen, Chelsea
[285]

When Walls Talk: Rodent-Cached Botanical and Ceramic Assemblages from a Nineteenth-Century Charleston Kitchen House

This poster focuses on the context of urban enslavement in the South Carolina Lowcountry, examining botanical and ceramic assemblages as mechanisms to create visibility for populations often who lived in close proximity with and are thus materially rendered less visible by their enslavers. The rodent-cached botanical

and ceramic assemblage of the Nathaniel Russell House Kitchen House provides archaeologists with new data to draw out the lived experiences of the urban enslaved through networks of formal and informal exchange that encompassed both urban and plantation loci. Rodent caches inherently save materials that would otherwise be consumed, planted, or discarded in household middens. By focusing on rodent-cached materials in an urban context, this poster continues the research program of the archaeology of urban enslaved lifeways through a comparative examination of botanical and material assemblages that have not been preserved in similar contexts. The results of the first phase of this study are presented, along with potential future avenues of exploration as this project continues.

Coil, Reed (Nazarbayev University)

[145]

Chair

Coil, Reed (Nazarbayev University)

[145]

The Effects of Carnivore Diversity on Scavenging Opportunities and Hominin Range Expansion during Out of Africa I
 Numerous extrinsic hypotheses explaining Out of Africa I, like faunal turnover and hominins following fauna, have been rejected based on paleoecological models. Others have explored the importance of the hominin intrusion into the carnivore guild. Here, I build on this hypothesis by proposing a complementary hypothesis; the scavenging corridor hypothesis (SCH). In East Africa, carnivore richness peaked around 3 Ma and declined gradually until shortly after 2 Ma. This timeline coincides with the development of early lithic technologies and initial evidence of the butchery of large mammals; thus implying that increased hominin carnivory impacted endemic carnivore diversity through the transition from passive to confrontational scavenging. The SCH posits that the relatively stable carnivore diversity and richness in Eurasia permitted hominin range expansion into Eurasian habitats after 2 Ma due to scavenging opportunities along continuously overlapping carnivore ranges. This study tests the SCH by examining carnivore diversity at African and Eurasian sites covering intervals before, during, and after initial Out of Africa I dispersals. This study builds on previous hypotheses about the role of carnivore guilds in hominin dispersals while tying in theoretical models on modes of early hominin carnivory and actualistic research on scavenging opportunities resulting from carnivore guild composition.

Coil, Reed [23] see Tashmanbetova, Zhuldyz

Cojti-Ren, Iyaxel (University of Texas, Austin)

[90]

Discussant

Cojti-Ren, Iyaxel (University of Texas, Austin)

[124]

Laws that Continue Depriving Indigenous Peoples of Their Cultural Heritage in Guatemala: Lesson for Archaeologists
 In Guatemala, the Law for the Protection of the Cultural Heritage of the Nation establishes that archaeological sites are the property of the nation and are under the exclusive protection of the state. From the point of view of Indigenous Peoples, this law is racist, exclusionary, and violates their rights since it legalizes the dispossession of Indigenous Peoples over their cultural heritage. In 2022, Bill 5923, called "Rescue of Prehispanic Heritage," was proposed with the objective of rescuing the prehispanic cultural heritage and promoting its conservation and restoration. The regulation of these tasks would be in charge of a National Council for the Rescue of Prehispanic Heritage formed by state entities with private and public financing. Once again, Indigenous peoples were not consulted about this bill, and their participation was not included in the so-called National Council despite the fact that this initiative directly affects their rights over their cultural heritage. The rejection of this bill provides with important lessons about the Indigenous

peoples' valorization of their cultural heritage, especially on sacred sites (archaeological sites). This case offers archaeologists reflections on the efforts Indigenous peoples have made to recover their past despite the legal and structural violence in Guatemala.

Colaninno, Carol [184] see Sturdevant, Clark

Colclasure, Cayla (University of North Carolina, Chapel Hill) and Zoe Schwandt (University of North Carolina)

[38]

Specters and Spectators: Paranormal Tourism and Historic Sites of Confinement in the American South

In this paper, authors Cayla Colclasure (she/her) and Zoe Schwandt (they/she) consider the phenomenon of paranormal tourism and related media as one way various publics engage with historic sites of confinement in the American South and attempt to bridge the epistemological divide between these forms of engagement with the past and the discipline of historical archaeology. We focus on historic sites of confinement such as prisons, jails, convict leasing camps, asylums, and sanatoriums as loci of difficult histories which have received widespread attention in the form of paranormal tourism and media. Through site visits, media analysis, and archaeology of digital spaces, we explore how the paranormal (mal)functions as a lens for education and learning about difficult histories, consider the implicit carcerality of haunting, and contemplate the afterlives of historic sites of confinement from an abolitionist perspective. Ultimately, the authors relate this discussion to their work on incarcerated labor, institutional life, and the multitemporal politics of confinement.

Cole, Kasey (University of Utah), Brian Coddling (University of Utah), Tyler Faith (University of Utah) and Randall Irmis (University of Utah)

[249]

Paleozoological Baselines Inform Climate Change and Help to Restore Indigenous Socioecological Systems: A Case Study from the Bear River Basin, UT

As human impacts on ecosystems accelerate, there is a growing emphasis in conservation planning toward maximizing the capacity of ecosystems to respond to anticipated changes in the near future. Doing so requires understanding how ecosystems responded to past changes (e.g., human impacts, altered climates) that occurred over timescales exceeding those of direct human observation. Paleozoological data provides such a record and documents baselines of animal communities that can be used to evaluate historic anthropogenic change and attest to the responses of species to ecosystem changes over geological timescales. This study uses paleoclimate and paleozoological data from a high-elevation cave deposit in the Bear River Basin, straddling modern-day Utah, Idaho, and Wyoming, to establish an independent record of faunal abundance for the region, capturing a greater range of potential species representation than historic observations. We then compare the paleorecord to modern zoological survey data and climate records to evaluate whether anthropogenic climate change has contributed to local range shifts or extirpations, as has been predicted for the region's montane mammals. Then, we discuss how our findings will contribute to an ongoing interdisciplinary project led by the Northwestern Band of the Shoshone Nation to restore Indigenous socioecological systems in the region.

Coleman, Caitlin [147] see Patton, Katherine

Collard, Mark (Simon Fraser University)

[25]

Chair

Collard, Mark (Simon Fraser University) and Jayc Sedlmayr (University of Tennessee Health Science Center)

[25]

Recent Manifestations of Belief in Embodied Spiritual Power in the Western World

When considering the claim that it has long been common for people to attribute spiritual power to certain body parts and bodily substances of humans and nonhuman animals and incorporate them into their religious beliefs and practices, there is a tendency for us, modern Westerners, to exoticize the phenomenon. We are liable to view it as something done by non-Western societies and ancient cultures rather than something we do. In the present paper, we hope to show that this is a mistaken framing. By highlighting both instances from the last few hundred years of Western history and contemporary examples, we will try to demonstrate that the belief that certain body parts and bodily substances of humans and nonhuman animals possess spiritual power has very much been part of the conceptual repertoire of the West in the modern period and still is for many Westerners. “Embodied spiritual power” is neither an alien belief nor an extinct one. It is one of our civilization’s collection of ideas and it is still very much alive.

Collard, Mark [281] see Beller, Jeremy

Collard, Mark [264] see O’Neil, Holly

Collazzi, Charlene (Center for Digital Antiquity [tDAR]) and Christopher Nicholson (Center for Digital Antiquity (tDAR))

[173]

Archaeological Data Reuse in Action: Three FAIR Examples in tDAR

The FAIR Principles for Data Stewardship asserts that data should be Findable, Accessible, and Reusable. Only by digitally preserving, efficiently curating, and ethically sharing data and information can we better understand the complex convergence of forces acting on humans and their societies across time and space. To this end, the Center for Digital Antiquity (CDA) advocates for the FAIR Principles to be implemented as the “industry standard” guiding all archaeological data management and reuse efforts. This poster highlights how CDA applies the FAIR Principles in its digital repository, The Digital Archaeological Record (tDAR), focusing on the reuse strategies, statistics, and successes of three exemplary collections: the Department of the Air Force (DAF), the Colorado Projectile Point Database, and the Digital Archive of Huhugam Archaeology (DAHA).

Collins, Angela and Mary De La Garza (Office of the State Archaeologist, University of Iowa)

[267]

What Makes a Better Surface Elevation Model: On-the-Ground Total Station or Low-Altitude Lidar?

Recent excavations on two small precontact archaeological sites in southeast Iowa provided an opportunity to conduct drone-mounted low-altitude aerial lidar in addition to the standard total station methodology to develop ground surface elevations and contours. The drone used for the projects was the industrial grade mapping inspection drone, DJI Matrice 300 RTK with base station. It was equipped with the DJI Zenmuse L1 lidar + RGB survey camera. With minimal leaf cover during the early spring of 2023, the lidar instrument provided highly detailed ground point data. This poster will compare the results gathered from the two technologies when analyzed independently as well as combined to determine which one reigns supreme.

Collins, Lauren (University of Florida)

[99]

Tracing Health Outcomes of Africans Who Were Enslaved in North Florida, Pre- and Post-emancipation

Florida stands as a unique case study due to being one of the few states to include Africans who were enslaved in the mortality schedules during the 1800s. The historical backdrop of Northern Florida’s settlement and its deep rooted ties to the institution of slavery sets the stage for a rich examination of pre- and post-emancipation treatment of non-White residents. This study provides a cursory analysis of health outcomes in North Florida, focusing on the difference between Africans who were enslaved and their White

contemporaries from the period surrounding the Civil War. Using the mortality schedules obtained from the Florida State Archives, this research explores historical data trends in order to illuminate the health trends surrounding the abolition of slavery in the region. This study approaches the available data with a critical perspective, understanding that challenges and biases inherent historical recordkeeping must be considered. Additional research into newspaper articles and other historical sources are used to provide context for the individuals under study. By cross-referencing these records with other documented proof of death, I aim to construct a comprehensive picture of pre and post-emancipation health outcomes, highlighting the enduring impacts of slavery on the well-being of African Americans in North Florida.

Collins, Matthew [259] see Jiménez Cano, Nayeli

Collins, Ryan (Lesley University)

[273]

A Preliminary Recontextualization of Lithic and Exchange Chronology of Coxcatlan Cave within the Tehuacan Valley, Mexico

In recent years, Coxcatlan Cave has drawn renewed attention for its early regional chronology and centralized location as a nexus point for interregional exchange. However, its importance for understanding shifting patterns of exchange and resource acquisition within the Valley of Tehuacan has yet to be explored. This research draws on the data gathered by the Tehuacan Archaeological-Botanical Project, directed by Richard S. MacNeish in the 1960s, to understand how exchange networks in Mesoamerica formed and transformed in conjunction with the development of urban society. MacNeish and colleagues collected over 3,000 obsidian artifacts from multiple caves and terrestrial surveys throughout the Tehuacan Valley—including Coxcatlan Cave. A total of 114 diagnostic obsidian projectile points from MacNeish's collection, currently in the Robert S. Peabody Institute of Archaeology at Phillips Academy in Andover, Massachusetts, were subjected to nondestructive X-ray fluorescence (XRF) analysis with a Bruker Tracer 5i analyzer and evaluated for this research. While the existing collection is an incomplete sample, the data produced from this analysis hint at a correlation between shifting point chronology, obsidian sourcing, and cave occupation over time, most pronounced in Coxcatlan Cave. This research is a crucial first step in recontextualizing early lithic exchange and resource use in Mexico.

Collins-Elliott, Stephen [95] see Jazwa, Christopher

Colón Loder, Wilhemina (University of Texas, Austin), Sheryl Luzzadder-Beach (University of Texas, Austin) and Timothy Beach (University of Texas, Austin)

[130]

Confluences: Canals, Wetlands, and Agroecosystems of the Ancient Maya in Northwestern Belize

Wetlands played a crucial role in the subsistence methods of early complex polities, including the ancient Maya. The scale of canal development in the Birds of Paradise wetland field complex reflect the status, technological power, and agronomic wealth that wetlands provided to the ancient Maya in this region during the Maya Late Preclassic to the Postclassic. These elaborate systems persisted through the Terminal Classic droughts well into the Postclassic. New findings from our field excavation at a specific canal confluence in summer of 2023 have revealed significant changes in the built environment that further support evidence for extensive and persistent water management practices. This site in Northwest Belize is a complex system of canals and fields within the Programme for Belize Rio Bravo Conservation and Management Area, roughly 5 km² wetland forest (with an additional 7 km² nearby) within the coastal plain of the Rio Bravo watershed. Further remote sensing and multiproxy geochemical analysis will provide greater understanding of wetland ecosystems and indigenous water management strategies at this site and may indicate adaptive strategies across extensive periods of climate variability against the changing tapestry of shifting polities.

Colón Loder, Wilhemina [125] see Beach, Timothy

Colten, Roger (Peabody Museum of Natural History, Yale University)

[304]

Interior Chumash Faunal Exploitation: The View from SBA-2464

Late prehistoric– and early contact–era Chumash society included wide-ranging exchange and social networks that integrated people among a diversity of ecological zones. Several of these models suggest three of the major ecological zones were the Northern Channel Islands, the nearby mainland coast, and the upper Santa Ynez River Valley (SYRV). While the coastal zone and the islands have received considerable attention from archaeologists in part due to exceptional preservation on the islands and modern development on the mainland, interior regions are not as well documented. The interior was also less densely populated and there were fewer sites than in the other two zones. This presentation includes faunal data from the late prehistoric and early historic site of SBA-2464 in the SYRV and compares those data to sites in the other two ecological zones.

Coltman, Jeremy (University of California, Riverside)

[90]

The Justin Kerr Maya Vase Database and Its Contribution to the Study of Maya Iconography

It is hard to overstate the rich intellectual benefits that iconographers and epigraphers have been given through the lens of Justin Kerr's remarkable Maya Vase Database. It not only brought to light a world of gods, rulers, courts, and vivid bestiary but also revealed complex narratives that are now only beginning to be understood. Part of the contribution, aside from the game-changing roll-out photography, is accessibility. The publication of *Maya Vase Book* provided a key resource until the era of the internet ushered in a platform to move online. It is now easier than ever to access the wonderful world of Maya art. Online archives are becoming more popular as is the need for clear, concise, and accurate searchable systems. Visual literacies are key. The preservation, expansion, and accessibility of this archive are immensely important for current and future researchers. The current work being undertaken at Dumbarton Oaks brings a renewed sense of order with its searchable lexicon, thus providing inspiration for similar endeavors that in the spirit of Justin Kerr's generosity, are creating a more global and accessible dissemination of Maya art and iconography.

Coltman, Jeremy (University of California, Riverside)

[252]

Discussant

[302]

Chair

Coltman, Jeremy [252] see Pohl, John

Colvin, Matt (New South Associates)

[229]

Squaring the Circle: Public Architecture of Fort Center and the Resiliency of Community

Within the southern Florida interior, Fort Center is most widely known for its monumental architecture and 2,000-plus years of occupation within a dynamic, and at times unpredictable, landscape. In this paper I discuss how peoples' early investment in communal architecture played a role in establishing and maintaining resiliency for successive generations. The architecture in question, an enclosed plaza, serves as a highly accessible communal space and was constructed with the expectation of cyclical environmental shifts. Although there are several other ditched encloses in the region, the persistence of Fort Center as a regional hub showcases how people recognized the value of connectivity regardless of perceived distance from one another. This is especially true now, when faced with ongoing and exacerbating environmental pressures.

Comer, Anne**[141]***Universal Access to Archaeological Parks and Sites: A State of the Question Part II*

For whom does “access” address and do current laws, nationally based, regarding accessible design foster enough guidance for effective site updates—if not, what can we as heritage professionals do to foster a more inclusive visitor experience, and how can we support archaeological park managers to create more inclusive programming? This session explores case studies highlighting the intricacies and vast interpretations of “access” and continues the conversation of an international working group formed under the auspices of ICOMOS/ICAHM to produce international guidelines for an accessible programming and management for open air UNESCO World Heritage archaeological sites. As the members of the working group approach the publication of our guidelines, we invite you to join us for a wider discussion on accessibility with our archaeology colleagues working in all forms of archaeological parks. Please join us in discussing how to make archaeology more inclusive for all.

Comer, Douglas [263] see Comer, Jacob

Comer, Elizabeth, David Reich (Harvard University), Douglas Owsley (National Museum of Natural History, Smithsonian), Henry Louis Gates (Harvard University) and Kari Bruwelheide (National Museum of Natural History, Smithsonian)

[311]*Using DNA to Connect Living People to Enslaved Ironworkers at Catoctin Furnace*

In 2023, “The Genetic Legacy of African Americans from Catoctin Furnace” was published in *Science*, demonstrating that it is possible to wed the power of massive direct-to-consumer ancestry databases with ancient DNA technology. Using the first reliable approach for identifying identical-by-descent (IBD) connections between present-day and historical people, we compared the DNA of 27 African Americans who labored at Catoctin Furnace, Maryland, during the late eighteenth to early nineteenth centuries to that of more than nine million research participants in the 23andMe genetic database. Key findings are 1) we identify 41,799 modern relatives. Of these, 2,975 are extremely close and include likely direct descendants. 2) We trace enslaved peoples’ origins in Africa. By sampling DNA from historical people with closer ties to Africa, we show that the enslaved workers at Catoctin derive from a small number of African groups, particularly the Wolof of West Africa and the Kongo of Central Africa. 3) We restore personal stories. Within the Catoctin African American cemetery, we identify five genetic families, primarily composed of mothers, children, and siblings who were buried close together. 4) We offer methods for communicating with descendants. We developed protocols to inform descendants and provide critical information and support.

Comer, Jacob, Douglas Comer (Cultural Site Research and Management Foundation), Adrian Borsa (University of California, San Diego), Bruce Chapman (Jet Propulsion Laboratory) and Benjamin Holt (Jet Propulsion Laboratory)

[263]*Current and Potential Applications of Satellite-Borne Lidar to Archaeological Research and Conservation*

With the advent of certain satellite-borne lidar instruments, the availability of free and extensive lidar data suitable for archaeological applications has become plausible. Here we use an airborne lidar dataset collected over the island of Pohnpei, in the Federated States of Micronesia, as a reference to test the utility of two satellite-borne lidar datasets, being collected by NASA’s Global Ecosystem Dynamics Investigation (GEDI) and Ice, Cloud, and Land Elevation Satellite-2 (ICESat-2) missions, for identifying and characterizing archaeological landscapes and features. Though these tasks are currently challenging, we offer observations on how satellite altimetry data products could become more readily applicable to archaeological research and conservation in the future.

Comer, Margaret (University College London)**[141]***Dark Heritage in Tallinn: Dissonant Narratives of Mass Violence*

This presentation will examine several museums and heritage initiatives connected to Nazi and/or Soviet violence in and around Tallinn, Estonia, through the lens of “dark” and “contested” heritage, as well as “competitive victimhood” and “securitization of the past.” It will analyze the narratives of victimhood, perpetration, and suffering that are communicated at these sites, “memorial” or not, and their interpretive mechanisms and lenses, in order to discuss patterns in the country’s overall interpretation and memory of repression. It will particularly focus on how regional and international “memorial forms” related to repression, death, and suffering are adopted and adapted for local use. It will also focus on how interpretations have changed in the aftermath of the intensification of the Russian war of aggression in Ukraine. Case studies include Vabamu and the KGB Prison Cells, Patarei Prison, the Estonian War Museum, and the Estonian Jewish Museum.

Compton-Gore, Kate (Northern Arizona University)**[8]***Addressing NAGPRA, Contamination, and Policy in Museums*

Under NAGPRA, a museum must inform recipients of repatriation of any known contaminants such as preservatives, pesticides, or other treatments that may present a potential hazard to the persons handling the item. However, NAGPRA does not require museums to test for contaminants, and historically museums did not regularly keep records of treatment. Very little is known about how museums inform about contaminants, or how it affects Native American communities who are waiting to receive ancestors and cultural items. Historical curatorial procedures involved treatment with pesticides made with heavy metals (such as arsenic and mercuric salts) and synthetic pesticides (such as DDT) to prevent biodeterioration or destruction by insects and other pests. Although the use of these contaminants ended by the 1980s, the harmful legacy on human health remains. This paper discusses preliminary results of a rapid policy evaluation on how contemporary museums are approaching the continuing issue of contaminated items, and how policy is developed and implemented to facilitate repatriation in instances where contamination is a concern.

Comstock, Aaron (University of Louisville) and Robert Cook (Ohio State University)**[101]***“General Diggings”: Where Did Harvard Dig? Determining the Actual Layout of the Turpin Site*

Over the span of a few winter months in the mid-1880s, Harvard University conducted excavations on the property of Philip Turpin in Hamilton County, Ohio. Under the direction of Charles Metz, a local physician, a small team excavated areas throughout the terrace on which a Late Woodland (ca. AD 400–1000) and Late Precontact (ca. AD 1000–1300) settlement, now known as the Turpin site, was located. Metz and his team excavated and recorded coarse information on dozens of refuse pits, hearths, houses, and ancestral burials. They made some cryptic notes about where features were located but made no site map and recorded no datum locations that they used to locate these features. This leaves us with the massive problem of hundreds of features with no provenience. We are attempting to solve this puzzle by working back-and-forth with excavation blocks we made based on the limited spatial data in the archived field notes with geophysical data and other results from our fieldwork at the site to try to best guess where Harvard excavated. Here, we detail the entire process we are following with initial findings about the actual layout of the Turpin site.

Comstock, Aaron [101] see Cook, Robert

Comstock, Aaron [101] see Lierenz, Julie

Comstock, Aaron [200] see Sherman, Allison

Conard, Nicholas (University of Tübingen)**[58]***Chair***Conard, Nicholas (University of Tübingen)****[58]***Recent Excavations and Research on Lithic Technology of the Swabian Aurignacian*

The study of the Swabian Aurignacian goes back to fieldwork in the 1880s in Bockstein Cave in the Lone Valley. Subsequent generations of archaeologists have excavated well-known sites including Hohlenstein-Stadel and Vogelherd in the Lone Valley and Geißenklösterle, Hohle Fels, and Sirgenstein in the Ach Valley. Over the last three decades, yearly excavations by the University of Tübingen in the Ach and Lone valleys have greatly improved our understanding of the cultural and chronostratigraphy of the Swabian Aurignacian. In addition to the famous discoveries of numerous figurative artworks, personal ornaments and musical instruments, this fieldwork has greatly expanded the size and improved the context of the lithic assemblages from this period dating between ca. 42 and 35 ka BP. In 2017, based primarily on the importance of the Swabian Aurignacian, UNESCO granted the caves of the Ach and Lone valleys World Cultural Heritage status. This paper reviews the history of research on the region's Aurignacian lithic technology and summarizes where research stands today, while highlighting the unique importance of the Swabian record of technological innovation at the beginning of the Upper Paleolithic in the Upper Danube drainage.

Conard, Nicholas [282] see McCartin, Madison

Conard, Nicholas [58] see Schray, Svenja

Conard, Nicholas [58] see Schürch, Benjamin

Conard, Nicholas [58] see Singh, Natasha

Concha O'Ryan, Josefina [13] see Ikehara Tsukayama, Hugo

Conger, Megan (University of Georgia), Sam Olvey (University of Georgia), Leonardo Umberger (University of Georgia), Carla Hadden (Center for Applied Isotope Studies) and Amanda Roberts Thompson (Laboratory of Archaeology, University of Georgia)**[176]***Rehabilitating the Radiocarbon Sample Archive at the Center for Applied Isotope Studies, University of Georgia, Athens, Georgia*

Since at least 1972, the Center for Applied Isotope Studies (CAIS) at the University of Georgia (UGA) has maintained an archive of the pretreated and unpretreated remnants of samples sent for radiocarbon dating and stable isotope analysis. This growing archive now contains over 15,000 archaeological and geological specimens. In August 2022, CAIS initiated a project to rehabilitate this collection by cataloguing and rehousing the entire archive according to UGA Laboratory of Archaeology and 36CFR79 standards. We discuss our process and detail some challenges unique to radiocarbon and other scientific sample archives. Drawing from our experience, we suggest some best practices for other institutions with similar collections. These include establishing complete and thorough informational control over collections and associated records, developing collections policies, and ensuring compliance with laws, such as NAGPRA (the Native American Graves Protection and Repatriation Act), which governs archaeological collections.

Conkey, Margaret (UC-Berkeley)**[156]***Rock Art and Slow Science: What's the Connection?*

In this paper, I will suggest that rock art research is an excellent example of how we can advance many of the goals of the slow science movement, despite continued practices by some rock art researchers that promote "the scoop" and other problems that slow science advocates are trying to work against. As rock art research

has been developing over the past several decades, there are important lessons for the enactment of more cautious, humane and even heart centered approaches in archaeology that celebrate ambiguity and the interconnectedness of knowledge and knowledge production. A few examples will be presented as to how rock art research has begun to be a prime domain for moving forward a more “slow science.”

Conlan, Christine, Dongya Yang (Simon Fraser University), Camilla Speller (ADaPT Laboratories), Claudia Kraan (NAAM Foundation) and Christina Giovas (Simon Fraser University)

[135]

Turtles All the Way Down: Tracing Long-Term Genetic Change in Southern Caribbean Green Turtle (Chelonia mydas) Populations and Applications to Modern Conservation

Caribbean sea turtle histories are deeply intertwined with past human activities. While modern DNA offers insight into impacts of recent stressors, to fully support sea turtle recovery we must account for activities acting on populations prior to modern baselines. Ancient DNA (aDNA) research offers a novel method for identifying timing and rate of change to reveal past genetic events (e.g., bottlenecks, admixture) that may have altered sea turtles' biodiversity. We apply aDNA methodologies to 80 archaeological green turtle (*Chelonia mydas*) bones from Archaic (3400 BC–AD 500/800), Ceramic Age (AD 500/800–AD 1499) and colonial (AD 1499–1954) sites across Bonaire and Curaçao to identify long-term genetic change. Samples from our local partner institution, NAAM, underwent amplification of the mitochondria's control region (D-Loop) in Simon Fraser University's dedicated aDNA lab identifying the presence/absence of haplotypes and haplogroups. Results are interpreted with respect to Curaçao and Bonaire's archaeology and past human resource exploitation, and the applied relevance to conservation biology priorities. Archaeological data will eventually be paired with modern DNA results to showcase archaeology's potential to support species conservation by offering long-term genetic and environmental data that can enrich current conservation management strategies supporting the restoration and maintenance of green sea turtle biodiversity in the southern Caribbean.

Conley, Norman [283] see Blakeslee, Donald

Conlogue, Emily (Harvard University) and Severin Fowles (Barnard College)

[84]

The Upland Agricultural Revolution of the Fourteenth Century

This paper reports preliminary results from intensive surface mapping and test excavations of precolonial agricultural systems at Picuris Pueblo. Our work alongside collaborators from Picuris has uncovered one of the largest continuous agricultural systems in the northern Rio Grande region. After five field seasons of mapping we have documented a kilometers-long terraformed landscape designed to capture and control the flow of rainfall in a high-altitude, low-precipitation upland environment. Carbon dates from test excavations place the oldest parts of the systems in the tenth century, with more recent modifications occurring through the early colonial period. The most extensive landscape alterations appear to have occurred during the fourteenth century, at the onset of major economic change: namely, the development of the Plains-Pueblo macroeconomy. The people of Picuris, through their strategic location and long-standing relationships with Plains groups, were positioned to be key players in this new economic regime. Here, we build from an assessment of the morphology and hydrology of the Picuris field systems to reevaluate late precolonial economic systems, paying special attention to questions of labor organization, land tenure, and ecological stewardship.

Connolly, Thomas [176] see Culleton, Brendan

Conolly, James (Trent University), Michael Obie (University of Toronto), Ana Aristizabal Henao (Trent University), Dylan Morningstar (Trent University) and Becca Scott (Trent University)

[130]

The Archaeology of Wetlands, Weirs, and Waterways in the Kawartha Lakes Region, Ontario

I provide an overview of the relationship between Archaic through Middle Woodland peoples and the ecologically heterogeneous wetlands and waterways of the Kawartha Lakes region of south-central Ontario. I focus on our research group's survey of submerged shorelines which has revealed a substantial underwater archaeological record that demonstrates a longer history of waterway and wetland use than the terrestrial record alone provides. Paleoecological reconstruction provides evidence for the importance of shallow water taxa, including wild rice, for strategic positioning decisions; and this in turn has strengthened our working proposition that areas of localized abundance emerged as drivers for long-term habitation histories, ritual investment, and social interaction that were the nodal places in the wider territorial landscape of this hydrologically complex landscape.

Conrad, Grace (Ohio State University) and Robert Cook (Ohio State University)

[101]

What's the Point? Contextualizing the Significance of the Turpin Lithic Assemblage

A long-standing point of contention has been the degree of continuity and change between the Middle Woodland (ending AD 500) and Fort Ancient periods (beginning about AD 1000). The intermediate Late Woodland period has become a placeholder but is clearly of great interest as it was a time during which peoples transitioned into corn-farming villagers. Here, we address this issue by focusing on diagnostic projectile points from a legacy collection from the Middle Woodland Turner site and the Late Woodland/Fort Ancient Turpin site housed at the Peabody Museum of Archaeology and Ethnology at Harvard University. The assemblage is relatively large but unfortunately, given the poor quality of the expedition, most of the points are without intrasite provenience. To combat this, we have revisited the site and systematically excavated many different areas within the site with which we can more accurately examine the significance of this important transitional site.

Conrad, Grace [101] see Cook, Robert

Constantino Perez, Glauco, Astolfo Araujo (University of São Paulo), Mercedes Okumura (University of São Paulo) and Ethan Cochrane (University of Auckland)

[3]

A Characterization of Archaeological Sites in the State of São Paulo: Some Notes

In the Brazilian state of São Paulo, different pottery producers are described ethnohistorically, and the most expansive is the Tupiguarani Tradition. However, pre-European population relationships between the Tupiguarani and other groups are unclear. This paper applies phylogenetic methods to the Tupiguarani and related ceramics based on their morphological, decorative, and technological aspects. Our analysis covers four important regions in the state: the north coast, the south coast, the central region represented by the Tietê River Valley, and the southern Paranapanema Valley. Our results reveal new patterns of cultural transmission in São Paulo state and highlight the interactions between Indigenous groups before European arrival. Our results also demonstrate the applicability of cultural transmission theory to generate testable hypotheses concerning teaching and learning mechanisms in the past.

Conte, Jillian [123] see DiEmma, Gabrielle

Conte, Matthew (Seoul National University), Jennifer Bates (Seoul National University) and Jangsuk Kim (Seoul National University)

[256]

Identifying the Gaps: Prospects and Limitations of Using Pottery Collections as Archaeobotanical Data in Korea's Neolithic

The Neolithic (ca. 6000–1500 BCE) is a formative period of Korea's prehistory that sees the beginning of plant cultivation. Although archaeobotanical research on Korea's Neolithic began more than two decades ago, rapid development coupled with an almost total reliance on rushed rescue excavations has resulted in major gaps in the archaeobotanical record. While nearly 1,000 sites associated with the Neolithic are known, only a small number of these (<20) have been systematically sampled for archaeobotanical remains. As a result, very little is known about (1) the timing of the arrival of foxtail millet and broomcorn millet, (2) the spatial scope of their cultivation and use, and (3) what other domesticated and wild plants were cultivated and/or used alongside millets. While the collection of archaeobotanical samples from sites excavated in the future will be crucial to gain a better understanding of plant use throughout the period, the use of legacy materials housed in museums provides one potential means of selectively sampling sites for archaeobotanical analyses. This paper will briefly discuss some of the prospects and limitations of using internal and external pottery impressions as a means of retroactively collecting archaeobotanical data from Korea's Neolithic.

Conti, Alberto

[33]

Assessing Inter-Site Variability in Southwestern Idaho Pottery Sites

The ethnographic record for southern Idaho indicates that pottery was primarily utilized for camas processing in the uplands and occasionally as stewpots. However, recent investigations reveal that Late Archaic ceramics occur beyond just riverine and upland locations, suggesting a broader use of pottery. This study aims to delve deeper into these findings by examining the assemblage variability in southwestern Idaho pottery sites. The data used in this study is a culmination of published research and survey data from southwestern Idaho. Artifact diversity and environmental setting will be used as a proxy for inter-site variability. Gaining this insight will enrich our understanding of pottery's role in seasonal resource procurement and its influence on mobility patterns. This study emphasizes the necessity of testing ethnographic analogies and reevaluating previous research in light of new data.

Contreras, Catalina [126] see Méndez, César

Contreras, Daniel (University of Florida), John Rick (Stanford University), John Wolf (Foothill College), Matthew Sayre (High Point University) and Silvana Rosenfeld (High Point University)

[27]

Searching for the Domestic at Chavín: Integrating 20-Plus years of Archaeology in La Banda

Even after more than a century of research at Chavín de Huántar, two key questions remain about who the ceremonial center was built for and who it was built by. As research attention has largely focused on pilgrims, priests, and peer polities, the labor force and craft specialists whose activities were fundamental to the site's success have remained backgrounded. Excavations outside of the monumental core, beginning in the 1970s, have attempted to address this elephant in the room, but salvage excavations associated with the 2003 construction of a new road on the east side of the Río Mosna were the first to produce any broad areal exposure of Chavín architecture outside the monumental core. In this paper we use "rescue photogrammetry" from photos and total station data produced by two decades of investigations in La Banda to consider the extent and character of that architecture. Integrating these data makes it possible to consider whether densely packed small-scale structures are necessarily proto-urban or even urban, whether non-monumental Chavín is necessarily domestic, and whether activity in La Banda was integral or marginal to Chavín's function as a ceremonial center.

Contreras, Daniel [242] see Vining, Benjamin

Contreras-Sieck, Miguel (National School of Anthropology and History), María Margarita del Olmo Calzada (Centro INAH Estado de México), Perla del Carmen Ruíz Albarrán (Laboratorio de Bioarqueología) and Maria Nieves-Colón (UMN)

[47]

Virtual Anthropology in Fieldwork, Conservation, and Education in Mexico: Lessons Learned, Challenges, and Future Perspectives

The development of novel digital technologies has consistently expanded the capacities to explore and approach existing anthropological and archaeological research questions. Virtual Anthropology stands as a relatively new interdisciplinary approach that further expands our resolution to study ancient and recent human remains, cultural contexts, and artifacts. The six tenets of Virtual Anthropology (digitize, expose, compare, reconstruct, materialize, and share), which allow the creation of digital replicas of human remains or cultural artifacts, have a great potential to expand research, education, and conservation in Mexico, but its consistent use and application that can translate into benefits is still on the horizon. Based on the experiences of preliminary fieldwork conducted in Mexico during the summer of 2023, we present an overview of the benefits that scanning and generating high-definition 3D models of objects can have in the context of teaching, research, and conservation of the enormous and rich collections housed and curated by the National Institute of Anthropology and History. Furthermore, we explore the challenges of this approach in the context of the asymmetries between the Global North and South by paying special attention to how the newly generated data could be handled in an ethical and legal manner.

Conway, Meagan (University of South Carolina Sumter)

[46]

Household and Community Scales of Post-Famine Demographic Change in Western Ireland

The national demographic ramifications of the Irish potato famine in the late nineteenth century are well documented; however, there is an absence of full understanding of the continuum of its social and psychological impacts. One way to access these impacts is through examination of specific persons; specifically, individual family histories. Individual family histories reveal the private rational(s) for splitting or relocating families, yet these are not necessarily generalizable to the population level; conversely, population-level studies alone cannot reveal the complex personal context of migration. Considering these together, however, allows us to more comprehensively and richly describe how changes in environment and social identity likely informed individual decision-making. Using a combination of evidence provided by historical documentation, excavation, and oral histories collected from Inishark and Inishbofin, Co. Galway, this project analyzes the complex reasoning for migration, the particularities of relocation, and the complex changes which impact the lives of both the transplanted migrants and those left at home. Examining this phenomenon on the microscale assists in drawing broader implications concerning the decision-making processes of both willing and unwilling participants in the Irish diaspora.

Conway, Meagan [46] see Malone, Gráinne

Cook, Gregory [57] see Gougeon, Ramie

Cook, Reese (Idaho National Laboratory, Cultural Resources Management Office)

[172]

A Spatial Analysis of Precontact Sites Containing Ceramics in Relation to Natural Resources and Landforms of Eastern Idaho

When comparing the volume of studies conducted concerning precontact ceramics in the eastern Snake River Plain of Idaho to its neighboring regions, it is evident that the underwhelming amount of information is

due to the lack of samples and the provincial reliability of the samples. Many past studies have been limited to garnering research data from donated samples originating from regional collectors. This study focuses on the distribution of a robust sample set of precontact sites containing ceramics situated in an 890-square-mile contiguous block of the land that has been closed to the public for approximately 75 years. It assesses the spatial distribution of these sites in relation to natural landforms and the water, obsidian, clay, plant, and animal resources within the eastern Snake River Plain and surrounding regions.

Cook, Robert (Ohio State University)

[101]

Chair

Cook, Robert (Ohio State University), Rebecca Hawkins (Algonquin Consultants), Aaron Comstock (University of Louisville) and Grace Conrad (Ohio State University)

[101]

Picking Up the Pieces of Harvard's Colonialist Archaeology: The Turpin Site in Social, Historical, and Archaeological Context

As with many archaeological sites, the Turpin site has factored into various social, historical, and archaeological narratives ranging from the good to the bad and ugly. Here we begin by situating Harvard's archaeology project at Turpin within the social context of the mid-1880s when fieldwork was conducted at the dawn of professional archaeology in the United States. Then, we examine later investigations regarding how and why the site was excavated and how it factored into local identity and an understanding of precontact history. We review the usual issues of looting and "othering" of the site's original inhabitants, but also surprising examples of stewardship and respect for the site demonstrated by one of the first Euroamerican residents, the Turpin family. The Turpin family was connected to Thomas Jefferson by marriage and the lands on which the site is located were one of many land grants given to American Revolutionary War veterans. In short, our aim is to contextualize the history of fieldwork at the Turpin with hope that this case study can help inform decolonization of other precontact legacy collections through targeted fieldwork.

Cook, Robert [101] see Conrad, Grace

Cook, Robert [101] see Comstock, Aaron

Cook, Robert [101] see Erter, Isabella

Cook, Robert [248] see Fargher, Lane

Cook, Robert [101] see Lierenz, Julie

Cook Hale, Jessica (Submerged Landscapes Centre SAFS, University of Bradford), Jessi Halligan (Texas A&M University) and Morgan Smith (University of Tennessee, Chattanooga)

[82]

Theory at the Waterline: Advances in Submerged Precontact Landscape Archaeology

The southeastern United States encompasses the greatest extent of submerged continental shelf in North America along with the greatest abundance of documented submerged precontact sites. It also includes some of the earliest documented precontact sites in North America, some of which are also submerged today. A substantial component of the early archaeological record in this region, and North America broadly, lies submerged offshore. Documented submerged site abundance moreover indicates high potential for offshore site preservation. While site identification remains a significant challenge, the efforts needed to meet this challenge are justified by the contribution of such sites to our overall understanding of the archaeological record. In this paper, we will review advances in theory and methodology designed to assist in this search. These advances are chosen to both assist in submerged precontact site identification, and more importantly, to articulate these sites with the onshore archaeological record.

Cooke, Colin [37] see Young, Michelle

Cooley, Delaney [254] see Palacios, Horvey

Cooper, Kory [42] see Apuzzo, Cassandra

Cooper, Lynden [219] see Naudinot, Nicolas

Cootsona, Melanie (University of California, Berkeley)

[84]

New Insights on Avifauna from Picuris Pueblo

The avifauna collection of Picuris Pueblo is fertile ground for understanding human-environmental relationships in the Northern Rio Grande. Migratory birds like geese (*Branta* sp.) illustrate the seasonality and adaptivity of past peoples, staples such as turkey (*Meleagris gallopavo*) show domestication strategies, and wild species such as doves (*Zenaida* sp.) convey how management shifted with the needs of the community. The ancestral pueblo was extensively excavated by Herbert Dick in the 1960s, but many of the faunal remains (mammalian) were lost and/or reburied and therefore unavailable for further study. However, the avifauna remains are intact and well-provenienced. The collection, curated by Hargrave and Emslie, demonstrates a unique archive of the past from the faunal record. Using taxon identifications from Emslie and new taphonomic data from the author, this paper reveals how birds and humans were using the planned and managed landscapes surrounding the Pueblo. Examining butcher practices, flock management, and animal behavior, this paper seeks to contextualize the avifauna's place in Picuris ancestral pueblo. This research is part of an ongoing look at how Picuris managed animal species in both formal and informal strategies to cooperate with the larger environment and changing geopolitical realities.

Copeland, Steve [199] see Dombrosky, Jonathan

Coppe, Justin [306] see Rots, Veerle

Corbett, Ray (JMA)

[304]

Exploring Temporal and Geographical Aspects of Chumash Mortuary Practice and Ceremonial Integration

Ethnographic and ethnohistoric evidence indicate that certain ceremonial objects were exclusively associated with 'Antap ritual specialists and were used in multi-community Chumash religious ceremonies. Analyses of the evolution of the form of these artifacts through time identified significant developments in ceremonial aspects of Chumash society. The timing of these changes is compared with transitions in other aspects of Chumash society. The evidence suggests that significant changes in artifact form correlated with increasing levels of ceremonial integration in Chumash society and supports the hypothesis that ritual elaboration and ceremonial integration were important sources of cultural change in Chumash society. This paper also addresses ethnic and cultural continuity through analyses of geographical and temporal patterns of mortuary practice in the Chumash region. Systematic analyses of mortuary assemblages provide substantial evidence for ethnic and cultural continuity rather than for population migrations and replacement. In general, mortuary practice was more strongly influenced by geography than by temporality. The most salient change in burial practice occurred approximately 2,000 years ago. There was also a convergence on a normative treatment approximately 1,000 years ago. I also examine both material and nonmaterial aspects of Chumash mortuary practice and assess the articulation between these two systems.

Cordell, Ann (Florida Museum of Natural History) and Neill Wallis (Florida Museum of Natural History)**[287]***Using Petrography to Fine-Tune Temper and Fabric Recognition of Indigenous Pottery in Florida*

Petrographic studies of archaeological pottery from Florida have contributed to our understanding of the range of variability in pottery tempers (prominent aplastics that may have been intentionally added to clay in pottery-making) and fabrics (characteristics of clay resources themselves). From the many studies carried out in the Florida Museum of Natural History's Ceramic Technology Lab over the years, we have identified/specified over 10 gross temper categories and seven petro-fabrics. Characteristics of each are illustrated here with clues for their recognition through standard and petrography microscopy. The time frame represented ranges from the Late Archaic to the early colonial period.

Cordell, Ann [287] see Rutkoski, Ashley

Cordero-Fernández, Rosario (Universidad Alberto Hurtado)**[112]***Hand Imprints in the Middle Ibañez River (Central Chilean Patagonia): Social Cohesion and Human-Nature Relations*

It seems that the primary function of painted hand imprints on rockshelters in the Middle Ibañez River Valley (Chile) may have been to assist in promoting social cohesion within and between hunter-gatherer groups. Hand imprints possess the quality of replicating the hand that created them, thus becoming a personal statement. These imprints have been associated with cultural significance and are intimately linked to the identity of their creator. Hand imprints should be seen as acts that record self-recognition in relation to the environment, with an awareness of the impact this has on the world. Moreover, the presence of small hands suggests that the occupations in the area were significant symbolic spaces for hunter-gatherers moving as whole family units, comprising both sexes and different generations. By expressing themselves using hand imprints on rocks, individuals and groups confer a specific meaning on the spaces they utilize and inhabit, as well as the way they perceive these locations. Following Troncoso (1998), it is likely that this action of expressing cultural concepts in space embodies an important ideological function: by embedding symbols in nature, they attain chronological permanence, implying a conception of time that extends beyond everyday life (Bradley 1993; Criado 1991).

Cordova Tello, Mario [273] see Jurado, Erik

Cormier, Aviva (Davidson College)**[241]***Chair***Cormier, Aviva (Davidson College) and Jane Buikstra (Arizona State University)****[241]***Distinctive Burials of the Phaleron Cemetery, Archaic Greece: Marginalized in Life and Death*

The Phaleron cemetery is most well known for the archaic burials of 79 young men who had been shackled, probably violently executed, and interred in three trenches. However, there are 80 additional individuals whose mortuary contexts fall outside expected forms, now categorized as "distinctive," which includes additional mass grave contexts or those positioned prone or tightly flexed in single graves. For the individuals buried in distinctive single burial contexts (N = 43), 40% were most likely bound, as suggested by limb positioning and/or the presence of metal shackles. Others are considered distinctive based solely on body positioning that fall outside expected forms, which cannot be directly correlated to a violent death. Nearly all of those in the mass grave contexts were bound at the time of interment. We examine patterns in the demographics, pathology, trauma, and isotope analyses to consider how experiences of physical and structural violence may have impacted their identity construction, physical well-being, and resulting mortuary treatment. This paper presents

the contextualized life histories of those buried in distinctive graves, exploring the connections between marginalization and violence during life and the distinctive burial forms representing their death.

Cornelison, John

[253]

Unearthing the Past at Shiloh Mound, Tennessee: Collaborative Insights from Partnering with David G. Anderson

The Shiloh Mound site in Tennessee is a rare example of a protected Native American mound group. This paper presents the outcomes of a pioneering archaeological expedition co-led by David G. Anderson, shedding light on the lifeways of ancient inhabitants through meticulous excavation and interdisciplinary analysis. Combining cutting-edge technology with traditional field techniques, our team unveils unique cultural coloring, offering fresh perspectives on mound use, material culture, and social signaling. The collaborative effort at Shiloh Mound enriches our understanding of the region's past. It offers a master class on collaborative leadership in an interdisciplinary approach to archaeology.

Coronado, Anabella (Universidad de Sonora)

[122]

Discussant

Coronado, Anabella (Universidad de Sonora)

[305]

How Indigenous Museology and Archaeology Can Contribute to the Well-Being of the Comcaac Community

The history and everyday lives of the Comcaac (Seri) people are intrinsically linked to their ancestral landscape on the central coast of the Sonoran Desert and the Gulf of California. The community's powerful and complex oral tradition, language, and the continuous occupancy of their originally nomadic territories, ties them directly and undeniably to the archaeological record. The Comcaac Museum, located at the tourist town of Kino Bay, was founded by the state government to "recognize and promote the legacy of the Comcaac." Most of the archaeological collection still await official classification by INAH, and the museum has operated with little consultation from the Comcaac. During the last decade, some families have showcased and sold crafts, or have performed their traditional songs and dances during museum events. Nevertheless, museums are obligated to build stronger partnerships, this paper presents a new participatory research initiative led by a group of Comcaac women to address some of the community's ethical dilemmas around museum practices and policy, biocultural conservation and indigenous tourism in their communal lands. A community-led heritage interpretation methodology is being implemented in a collaborative effort to include the cultural and ecological traditional knowledge of the Comcaac to advance Indigenous Museology and Archaeology.

Corona-M, Eduardo (Instituto Nacional de Antropología e Historia, Centro INAH Morelos) and Ivonne Giles Flores (Instituto Nacional de Antropología e Historia)

[260]

The Effects of the Colonial Introduction of European Domestic Fauna in Some Localities of Southern Mexico

The introduction of European domestic fauna during the Spanish conquest represents a major change in the cultural use of animals, influencing both how they acquired and processed. Although this point has been recognized, in fact it has been poorly documented. This work, based on the common protocol for archaeozoological studies, analyzes a collection of five localities from the state of Morelos, Mexico. They are chronologically located between the Postclassic and mid-colonial periods, some of them showing one or more occupational stages. The initial hypothesis proposes that the introduction of European domestic animals caused a reduction of faunal diversity in the human settlements compared to prehispanic practices. Thus, the faunal contents of the sites were measured and compared by means of diversity index, looking for the differential impact in a regional perspective on the cultural use of animals. The preliminary results of the sites suggest a faunal use pattern where the most radical change was the introduction of European domestic

fauna, mainly cattle, sheep, and, to a lesser extent, poultry; while persistence is represented by local resources, probably from occasional milpa hunting.

Corr, Molly
[67]

Ancient DNA: Investigating Maya Domesticated Waterscapes

Environmental DNA (eDNA), or the genetic material obtained from sediments, ice, or water, is a relatively new and untapped methodology in archaeology. This technique provides important insight into the biodiversity of different plant, animal, and microbial communities, positioning archaeologists to understand human-landscape interactions of the past better. More specifically, eDNA is a powerful tool for reconstructing ancient Maya environments, shedding light on both domesticated and wild vegetation growth around artificial bodies of water (Lentz et al., 2021). This study builds on previous work by examining plant DNA extracted from canal and reservoir sediments at the Late Preclassic Maya site (ca. 200 BCE–200 CE) Mensabäk in Chiapas, Mexico. By detailing our methodology and discussing the implications of eDNA analysis, we hope to understand better the construction and use of domesticated waterscapes and, more broadly, resource and water management in the Maya region.

Corrales, Carolina and James Allison (Brigham Young University)
[285]

Ceramic Variability at Alkali Ridge Site 13

Alkali Ridge Site 13 is a large ancestral Pueblo village in southeastern Utah dating to the late AD 700s. Ceramics from the site consist almost entirely of small gray ware jars and decorated red ware vessels in a variety of forms. Extensive excavations by Harvard at the site in the 1930s recovered more than 100 whole or reconstructible vessels, which provide data on the range of vessel forms and sizes at the site. Analysis of rim sherds from recent excavations by Brigham Young University in 2012 and 2013 demonstrate variability in raw material choices and measurable vessel properties such as porosity. Notably, potters used a narrow range of clays, which oxidize red, to make red ware vessels. Some gray ware vessels are made with clays similar to those used for red ware, but potters also used a wide range of other clays to make gray wares, using firing methods to control the final color. We combine data from sherd and whole vessel analyses to explore the relationship among vessel form, size, raw material selection, and the technological properties of vessels at the site.

Corrales-Ulloa, Francisco (Museo Nacional de Costa Rica)
[296]

Monumentality in Sites with Stone Spheres, Diquis Delta, Southern Central America

Several sites in the Diquis delta, an extensive alluvial plain in southeastern Costa Rica, present architectural ensembles consisting of artificial mounds up to 30 m diameter and a height between 1.1 and 1.4 m with cobblestone walls and ramp accesses, with stone spheres of a similar diameter (1.2 m in average) in their corners. This would be a context of “composite monumentality” including spheres and structures that would have reinforced the importance of those who lived in or used such structures and spaces. Sites such as Finca 4, Finca 6 and Antigua Finca 7 due to its location within the alluvial plain and complexity better withstand the periodic flooding of the delta. The presence of elevated structures and a slightly higher elevation (10 m asl) could favor population concentration and the generation of material stratification expressions. In Finca 6 and Antigua Finca 7 there have been findings of complete and fragmented zoomorphic and anthropomorphic sculptures associated to the access ramps that contribute to their composite monumentality. These statuary objects are local in nature and of circulation restricted to the delta. They can be considered as inalienable possessions whose retention serves to legitimize the status of individuals or groups.

Corrales-Ulloa, Francisco [222] see Badilla, Adrian

Corrales-Ulloa, Francisco [157] see Herrera, Roberto

Correa, Leticia (University of São Paulo) and Astolfo Araujo (University of São Paulo)
[3]

Paleoindian Sites and Their Cultural Diversity in Southeast, Brazil: A Case Study from São Paulo State

The archaeological record for the early Holocene in Brazil shows great cultural diversity, suggesting the coexistence of different groups. Recently, we have noticed that São Paulo State does not behave differently. These distinct groups inhabited shelters, open-air areas, and fluvial shell mounds, leaving a very diverse lithic industry characterized by assemblages with points, slugs, retouched flakes, or simple flake products, ranging from very dense industries to those with less evidence. Some of these sites still show a long-term occupation with a possible cultural continuity evidenced by stone tools. In this presentation, we will discuss how those dated sites and their lithic industries have been used to understand human dispersal in the area and how they can be related to the surrounding finds.

Correa, Leticia [3] see Araujo, Astolfo

Correa Girrulat, Itaci (Universidad Alberto Hurtado)
[117]

Chair

Correa Girrulat, Itaci (Universidad Alberto Hurtado), Valentina Cadena (Universidad de Chile), Claudia Montero (Fundación Desierto de Atacama), Javier Arévalo (Fundación Desierto de Atacama) and Javiera Giberto (Universidad de Chile)
[117]

Pottery Offerings and Ritual Gestures in Sutar Conti, a Ceremonial Site on the Processional Pathway of the Licancabur Pampa, San Pedro de Atacama, Chile

Inter-nodal archaeological studies show how pottery, among other functions, is part of the offerings found in ceremonial contexts associated with journeys through the Atacama Desert. Focusing on ethnohistorically recognized processional pathways, with the Licancabur volcano as a ceremonial node, our investigation centers on Sutar Conti, a site renowned for its material and structural remains. Our research explores the role of pottery documented at this site, which spans from the Early Formative period (ca. 3000 BP) to posthispanic times. Notably, two ceramic types exhibit high frequencies: the locally polished black or gray Séquitor (1900–1600 BP) and the foreign Yavi style (1100–500 BP) from Talina, Potosí, indicating connections between the northeastern puna of Jujuy and southern Bolivia. Most sherds can be assigned to individual vessels. Through detailed spatial analysis, we discern distinct patterns of deposition and breakage associated with structures, the pathway, and the landscape. We interpret these differential patterns as distinct ritual gestures, following Nielsen et al. (2017), offering insights into both chronological and identity-related aspects of these journeys.

Correa-Metrio, Alexander [320] see Antorcha Pedemonte, Ricardo

Corrway, Laura [22] see Scott, Rachel

Cortegoso, Valeria (CONICET-UNCuyo-Argentina)
[306]

Chair

Cortegoso, Valeria [266] see Castro, Silvina

Cortegoso, Valeria [67] see Yebra, Lucía

Cortell-Nicolau, Alfredo [308] see Barton, C. Michael

Cortés Rodríguez, Constanza [178] see Sierralta Navarro, Simón

Cortez-Rincon, Marisol [141] see Angeloff, Nick

Cortijo-Robles, Karina (University of Maine), Jiaze Wang (University of Maine), Elizabeth Leclerc (University of Maine) and Antonio Curet (Smithsonian Institution)
[281]

Reconstructing the Paleotempestology Record from the Tibes Indigenous Ceremonial Center at Ponce, Puerto Rico
[WITHDRAWN]

Cory, Mackenzie (Washington State University)
[231]

Paracosmic Play Areas in Western Plains Boarding and Day Schools

Childhood play areas represent a complete departure from the landscapes that archaeologists often examine in that they physically exist within adult domestic, logistic, and/or sacred spaces yet simultaneously outside of any of these spatial ideals. The difficulty in analyzing these areas is further compounded when the implications of Indigenous ontologies are considered, especially those of children who may or may not fully engage with larger cultural systems, and even more so when considering the intersection of children's understandings of the intersection between their belief and colonial policies. In this paper I briefly present the methodology that I use to identify where children played in boarding and day schools in the western Plains, based on evidence from the historic and archaeological records, and discuss the micro-paracosmic nature of these play areas drawing from traditional Native understandings of childhood. Finally, I take a closer look at the phenomenological "reality" of these spaces and argue that, at least when occupied by playing children, these areas require an expanded understanding of contemporary archaeological approaches, an understanding that draws from the unique lens of the children themselves.

Cosman, Kathryn [99] see Pamplin, Erin

Costa, August (Rice University), Amanda Evans (Gray and Pape Inc.), Leslie Bush (Macrobotanical Analysis) and Richard Weinstein (Coastal Environments Inc.)
[57]

Revisiting the Submerged Shell Midden at Sabine Pass: Preliminary Core Results from the NOAA Exploration Mission: Paleolandscapes and the ca. 8000 BP Shoreline on the Gulf of Mexico Outer Continental Shelf

Over 40 years ago Coastal Environments Inc. pioneered a phased approach to identify prehistoric occupations on the now submerged outer continental shelf of the Gulf of Mexico. This work homed in on a target in the Paleo-Sabine Valley and identified one of the first in situ, submerged prehistoric sites known in the Americas. The Sabine Pass Block 6 (SP6) site is 8 miles offshore the Texas-Louisiana border under 40 feet of water. The site consists of a possible shell midden and burned bone dating to 8000–8500 BP. Although unsettled, this discovery was thought to be more like archaeological than natural deposits. In June 2020, new cores were recovered from SP6 as part of a NOAA funded expedition to investigate the Late Quaternary paleolandscapes and peoples of the submerged continental shelf. Preliminary data on core 109 from SP6 provides a more detailed picture of the SP6 "midden."

Costello, Judy [45] see Zabecki, Melissa

Costin, Cathy (California State University, Northridge)**[146]***Discussant***Costin, Cathy (California State University, Northridge)****[333]***Iconographic Evidence for Altered States of Consciousness in Andean Cupisnique Visual Culture*

Although a shamanic component has long been recognized in Andean Formative cultures, recent research on Cupisnique (ca. 1200–900 BCE) ceramic iconography yields evidence for more varied, more prevalent, and much more far-reaching use of therapeutic and entheogenic substances during the early phases of Andean prehistory than has been previously reported. The imagery on special purpose ceramics forms—especially the iconic stirrup-spout bottle—includes depictions of psychoactive flora and fauna, the presumed production and consumption of neuroactive brews, and the bodily sensations, altered states of consciousness, and visions they produced. Other imagery includes animals closely associated with shamanic practice in the past and the present, a practice rooted in the deployment of altered states of consciousness to divine, counsel, and heal. Even images of seemingly mundane or prosaic plants, animals, and objects bear esoteric markings that link them to altered states of consciousness. The low visibility of many of these esoteric markings suggests that some information about ASCs was meant to be kept secret and available only to a few privileged individuals during therapeutic and divinatory rituals and performances.

COSWA Committee Members [129] see Vacca, Kirsten

Coughlan, Michael (University of Oregon), Kelly Derr (University of Oregon), David Lewis (Oregon State University), James Johnston (Oregon State University) and Bart Johnson (University of Oregon)**[133]***Ready, Aim, Fire: Darts, Arrows, and Precontact Era Fire Use in the Western Cascades*

In Oregon, Indigenous oral histories and ethnohistories document the use of fire as an important part of the Indigenous subsistence system. Fire was used for plant tending, harvesting, and collecting, but also in hunting. Transitions in hunting technologies are often associated with significant changes in entire subsistence systems. For instance, the transition from atlatl and dart to bow and arrow in western North America as evidenced by morphological changes in lithic projectile points is hypothesized to have been associated with shifts in social organization, settlement, and resource use dynamics. Further, the timing of the dart-arrow transition is hypothesized to have varied geographically, with some groups retaining the atlatl longer than others. In this paper, we test a late dart-arrow transition hypothesis and explore how this transition may have differentially affected patterns of Indigenous fire use for a watershed in Oregon's western Cascades. We integrate multiple lines of evidence, including radiocarbon dates, obsidian sourcing and hydration, cross-dated fire histories, ecological site interpretation, and ethnohistory to refine chronological analysis of the dart-arrow transition and its implications for local fire ecology.

Covell-Murthy, Amy**[39]***Discussant***Coverdale, Julia (Binghamton University)****[171]***What's with Exterior Corrugation on Bowls? Using Spatial Analysis in GIS to Track Ceramic Deposition*

Corrugated exterior white wares in the Ancestral Puebloan world are often thought of as a rarity. While these ceramics are not as common as gray ware corrugated or regular black-on-white ceramics, they are an

important blending of pottery manufacture. Corrugated whiteware ceramics can also help us begin to understand symbolism and meaning of corrugation itself. By using geographic information systems (GIS), significant patterns of deposition of these ceramics can be identified. In this poster, I will discuss spatial and temporal analysis of corrugated whiteware in the Northern and Middle San Juan Basin during the Pueblo II period (CE 900–1150). Through this spatial and temporal analysis and Great House site data from the region, I hypothesize that corrugated whitewares are associated with the Chaco Phenomenon.

Cowan, Jacqueline and Ryan Peterson (Indiana University, Bloomington)

[281]

Lake Superior's Relict Shorelines: Geochronological Dating of Archaic Sites in the Northern Lake Superior Basin
 Since the end of the last major glaciation over 10,000 years ago, lake levels in the Lake Superior Basin have varied considerably. This variation caused the formation of relict shorelines that were left behind as water levels dropped. At around 6,600 years ago, the lake level began to rise in an event that took place over the next 700 years. This event marks the beginning of the Nipissing phase which varied over the next 2,000 years, reaching its peak between 4,500 and 5,000 years ago. The tight geochronological component of these relict shorelines provides a unique opportunity to target and date archaeological sites found along their shores. This project works to reconstruct the Nipissing relict shoreline in the Thunder Bay region of Ontario, Canada by mapping strandlines and elevation estimates associated with the time frame using digital elevation models derived from the Ontario Classified Point Cloud data. The results of this mapping are then compared to the locations of suspected Archaic sites in the region to identify if these sites correlate to the Nipissing relict shoreline and test the potential use of this model for identifying archaeological targets for further investigation.

Cowell, Shannon [88] see Doelle, William

Cowie, Sarah (University of Nevada, Reno)

[297]

Humanizing Archaeology

Teresita Majewski has influenced archaeology and heritage management in extensive and diverse ways. To my mind, her contributions all have one idea in common: humanizing the field. Here I present three examples of her influence on my own work, especially regarding ceramic analysis and work with stakeholders, research partners, and students. First, I present a case study of archaeology at the St. Mary's Hospital site in Virginia City, Nevada, where outreach to a related Catholic organization led to important conversations about meaning and ideology in ceramics found at the site. Second, I discuss collaborative archaeology and humanizing relationships in conducting research "by, with, and for" Native communities at the Stewart Indian School site in Nevada. Finally, Terry's mentorship deserves comment, as we know that she always mentored the whole person, and this has been impactful in how we pay it forward.

Cox, Brian [99] see Pamplin, Erin

Cox, Kim

[244]

The Art and Light of Paint Rock, Texas

The archaeological site of Paint Rock, Texas (41CC1) at over 300 m in length is the largest continuous rock art site in Texas. Many of its older pictographs have been scheduled to spectacularly interact with the sun on the equinoxes and solstices and apparently also on the cross-quarter days. The older rock art at Paint Rock shows strong connections with the rock art of the Lower Pecos and with Mesoamerican ideology.

Crabtree, Pam (New York University)**[234]***Moderator***[10]***Discussant***Crabtree, Pam (New York University)****[22]***Feeding Medieval Towns: The Zooarchaeological Evidence*

Provisioning played a critical role in the establishment of early medieval towns in northwestern Europe from the eighth through the tenth centuries CE. Zooarchaeology can reveal how the inhabitants of early medieval towns obtained meat and other animal products. Recent zooarchaeological research has revealed how the sites of Ipswich (seventh–twelfth centuries CE) and Antwerp (eighth–tenth centuries CE) obtained animal products. This paper will compare the zooarchaeological evidence from early medieval Ipswich (UK) and Antwerp (BE) with the evidence for urban provisioning at other eighth- to tenth-century towns in northwestern Europe.

Crabtree, Stefani (Santa Fe Institute; Utah State University)**[303]***The Centrality of Saplings: Trees and Archaeoecological Analysis*

Often when we examine past ecologies we focus on food webs—what people ate, and how people were connected to larger trophic entanglements. However, by analyzing the networks that form around the myriad uses beyond food of other biota we can see how humans embed themselves in and structure ecologies worldwide. As part of the archaeoecology project we have analyzed seven cultures around the world and noticed that one thing is in common—each of these places have trees as a central position in the network of taxa that humans use. In this paper we leverage network analysis to understand the central position of tree species around the world and discuss the implications that this had both for the cultures using those trees and for the ecologies more broadly. When exploiting a tree species often that species is removed which can convert forest spaces to grasslands. A network approach can help us understand these trade-offs and help us to examine the central place that trees held for multiple cultures worldwide.

Crabtree, Stefani [99] see Holt, Evan

Craig, Cesca [242] see Vining, Benjamin

Cramb, Justin (University of Alaska, Fairbanks)**[301]***Property Regimes, Resource Protection, and Sustainability in the Remote Pacific*

The tradition of resource-use prohibition known as *rahui* is found throughout the Pacific Islands. *Rahui* typically involves placing certain resources or areas of the land and sea under the protection of a central authority. For *rahui* to exist the concept of collective resource exploitation must also exist. This appears antithetical to the traditional and current land tenure practices on many islands where individuals and families hold control of traditional territories. However, concepts of centralized authority and *rahui* appear to supersede concepts of individual or lineage-based resource control. The ubiquity of *rahui* and similar practices in East Polynesia suggests a long antiquity perhaps stretching back to the first colonization of uninhabited islands by Polynesian voyagers. Through archaeological, ethnohistoric, and ethnographic data from the Northern Cook Islands I demonstrate how past concepts of *rahui* interact with property regimes and the development of sustainable resource use practices as well as how *rahui* is conceptualized, enacted, and viewed today. I argue that the tradition of *rahui* may have influenced, and strengthened, the development of flexible political institutions that promote centralized authority and population sustainability above individual or lineage-based control.

Cramb, Justin [200] see Elder, Jason

Crandall, James [81] see Guengerich, Anna

Crandall, James [30] see Warner, John

Crane, Jeff (Dean of CAHSS, Cal Poly Humboldt University)

[10]

Discussant

Cranford, David (NC Office of State Archaeology), Chris Southerly (NC Office of State Archaeology, UAB), Kim Kenyon (NC Office of State Archaeology, QAR) and Stephen Atkinson (NC Office of State Archaeology, UAB)

[154]

Assessing 60 Years of North Carolina Dugout Canoe Research

Recent discoveries of dugout canoes from North Carolina and elsewhere have renewed public interest in these types of artifacts as well as interest from several local Indigenous communities, while also highlighting the increasing threats to this type of cultural heritage. North Carolina's abundance of coastal lakes and rivers have yielded a substantial number of specimens over the last 60 years. This paper reflects on past and current efforts to document, conserve, and preserve North Carolina's dugout canoes.

Cranford, David (NC Office of State Archaeology)

[317]

Discussant

[317]

Chair

Crass, Barbara [168] see Smith, Gerard

Crater Gershtein, Kathryn [140] see Breslawski, Ryan

Crawford, Dawn (Southern Methodist University AR Consultants Inc.) and Brigitte Kovacevich (University of Central Florida)

[122]

Changes in Obsidian Procurement and Use from the Preclassic to the Classic Periods at Holtun, Guatemala

Imported obsidian is often representative of regional trade patterns in Mesoamerica. Such patterns for the Central Lowland Maya have been documented and allow for comparisons between sites and between periods within a single site. In this paper we compare the procurement and use patterns of obsidian between the Preclassic and Classic periods at Holtun. While excavations at Holtun uncovered less obsidian than other, larger nearby sites, such as Tikal and Yaxha, the presence of obsidian throughout the site's occupation allowed for the analysis of intrasite spatial and temporal patterns. Sourcing and use studies of Holtun's obsidian indicate a shift not only in procurement from the Preclassic period to the Classic period but a change in how and to what extent obsidian blades were used over time. Like many other lowland Maya sites, Holtun experienced a shift from emphasizing San Martín Jilotepeque obsidian in the Preclassic to El Chayal obsidian in the Classic period, though usage patterns during both periods suggest that El Chayal was often conserved at higher rates regardless of its overall availability.

Crawford, Erin [89] see Ogborne, Jenn

Crema, Enrico [118] see Vieri, Jasmine

Cressler, Alan [156] see Simek, Jan

Criado-Boado, Felipe (INCIPIT-CSIC) and Jadranka Verdonkschot (INCIPIT-Institute of Heritage Sciences, CSIC)

[28]

When Studying Landscapes . . . What Actually Does “-scape” Mean?

This paper is an appeal for a structural archaeology, analogous to what used to be called structural anthropology. Or at least an appeal for a structural archaeology of landscape. Landscapes are active, performative, changing, temporal, moving, contingent, situated . . . but they are also the result of a design, whether intentional or embedded, from above or from below. They embody a pattern. The pattern becomes regular. Regularity becomes structure. The structure points to an inner model. The inner model is realized in the landscape. Landscape archaeology is an inverse engineering of all these processes. The sociocultural processes behind the landscape can be deconstructed if, among other things, it is accepted that there is structure in the landscape shape. As far as we are talking about the 5Es+A model of the mind (the paper will also deal with this conceptualization), we can talk about the 5Es+A landscape. This paper is part of the ERC Synergy XSCAPE project on Material Minds. Enactive, engaged, embedded, embodied, extended + affects and emotions.

Crider, Andrea (ASC Group Inc.) and Kevin Schwarz (ASC Group Inc.)

[228]

The Structural Archaeology of a Middle Fort Ancient Village: Recent Investigations at the State Line Site

This presentation provides an overview of recent discoveries and excavations at the State Line site on the Ohio-Indiana border near Cincinnati, Ohio. The State Line Site is primarily a Middle Fort Ancient Anderson Phase village (ca. AD 1050–1275), with earlier components. ASC Group Inc. has led ongoing investigations at this site as part of a Section 106 compliance project for an intersection improvement project. A brief overview of field and laboratory research will be presented with a focus on identified Fort Ancient period structures. Terminology, approaches, and insights from recently published research on ancient architecture of the Ohio Valley will be integrated with new data from the State Line site. Specifically discussed will be the discovery and documentation of a large, unique wall trench structure believed to be a community structure.

Crider, Destiny (Luther College)

[152]

Discussant

Crider, Destiny (Luther College)

[214]

Ceramic Pastes: Refining Epiclassic and Early Postclassic Basin of Mexico Typologies and Interactions Close to Home

The interplay of compositional, stylistic, and technological variation of pottery from the Basin provides the framework to assess shifting patterns of regional interaction. The Epiclassic is characterized by Coyotlatelco pottery, although this pottery was locally made and used with minor amounts of exchange with neighbors. Also, unique ceramic complexes within parts of the Basin and Mexico (and neighboring Tula) developed early in the Epiclassic—especially in the southern Basin and north in Hidalgo. Transitioning from the Epiclassic to the Early Postclassic, regional patterns of interaction begin to shift as evidenced by adoption of new ceramic types and changing settlement patterns. In order to further understand how ceramic production can provide

new insights into interactions between neighboring communities, I am implementing a macroscopic study of ceramic pastes (binocular microscope) that helps to refine ceramic typologies and classify large groups of sherds according to their observable mineral components and texture. Paste groups are assessed from samples that have undergone chemical source characterization (INAA) and have been classified according to regional pottery complexes. A selection of cases are highlighted that provide new resolution of ceramic production and implications for interaction among neighboring communities of Central Mexico.

Crider, Regan [266] see Lewis, Jeffrey

Crisp, Elizabeth (University of Oklahoma)
[284]

Frontier Fundamentals: An Analysis of Artifacts from Historic Fort Gibson Military Site

Located in Eastern Oklahoma, Fort Gibson acted as the starting gate for America's military expansion into the West. Founded in 1824, Fort Gibson played a role in mediating encounters between the Osage and Cherokee until 1857. The Fort reopened at the start of the American Civil War and operated until 1890. Fort Gibson serves as an excellent archaeological resource for uncovering the everyday lives of frontier soldiers and those around them. This poster presents the preliminary results of my analysis of ceramics, glass, and small metal artifacts recovered from excavations near the fort's reconstructed barracks and original stockade in 2017 and 2018. This research suggests that even small samples of recovered artifacts can be useful in understanding how enlisted men and others lived at Fort Gibson.

Crisp, Robert [44] see May, J.

Cristiani, Emanuela [247] see Boric, Dusan

Critz, Tuesday [52] see Berryman, Judy

Crock, John (University of Vermont)
[127]

Reconstructing Early Settlement in the Northern Lesser Antilles while Honestly Accounting for Site Loss

Significant site loss due to sea-level rise and modern development significantly impacts the known and potentially present inventory of archaeological sites attributable to the initial peopling of small islands in the northern Lesser Antilles. Coastlines available for occupation during periods of early settlement are presently submerged portions of vast shallow offshore banks. Increased development associated with tourism and population growth over the last several decades further limits the sampling universe in which we might discover new evidence of early settlement. We face this reality with a handful of sites and a comfortable amount of speculation.

Crockett, Cenetria [72] see Jennings, Thomas

Croes, Dale (Washington State University) and Ed Carriere (Suquamish Tribal Elder)
[167]

Generationally-Linked Archaeology: "Living-Off-the-Land" for 4,000 Years on the Salish Sea

Ed Carriere, Suquamish Elder and Master Basketmaker, and I published on how ancient Salish Sea basketry styles statistically linked through 4,000+ years in style to the basketry Ed learned from his great-grandmother

Julia Jacobs (born 1874) who raised him from infancy. Ed helped me analyze 2,000-year-old wet archaeological basketry from his traditional territory, and we were able to replicate these styles from 100 generations back, demonstrating a continuity of styles through statistics and his current basketry. We called this a Generationally-Linked Archaeology approach. If this worked with ancient basketry, then it should work with other cultural practices of his early life. Since he was raised by Julia and they had little but their shoreline Indian Allotment land the first half of his life, they essentially “lived-off-the-land” using all the native resources to support themselves: shellfish, fish, ducks, mammals, and berry crops. We are comparing their practices with the archaeological fauna/flora analyses within 20 miles of his allotment land for 4,000+ years. The initial results show a trend supporting Generationally-Linked Archaeology, with similar resource occurrences and frequencies through time. Also information not preserved archaeologically is presented: resource behaviors, capture techniques, preparation procedures, cooking, taste, and storage practices.

Cross, John [213] see King, Eleanor

Croucher, Karina (University of Bradford) and Jo-Hannah Plug (University of Liverpool)
[25]

Keeping the Dead Close

This paper explores the use of anatomical body parts—namely, skulls and crania—in the Neolithic of southwest Asia. It is clear that for many, the dead were kept close to the living, with their remains physically used by the living. Discussing plastered skull, the paper explores potential beliefs around practices where the remains of the dead are retained; in particular, arguing that there may have been a desire for the dead to maintain a place in their communities beyond the grave. This debate is set in a broader context of theories of grief and loss, suggesting a desire to maintain “continuing bonds” with the deceased.

Croucher, Karina (University of Bradford)
[147]

Discussant

[147]

Chair

Crowley, Suanna (SWCA)
[184]

Transformations in Professional Archaeology

Most professionals in archaeology emerge from educational centers hosted within departments of anthropology, where the four-field approach has dominated training. Market forces and preference for the STEM fields are now constraining educational opportunities for the humanities and social sciences. Declines in postsecondary enrollment, programs unable or unwilling to adapt, or outright closures are at play. Higher-education decision-makers are questioning the value of degrees in archaeology and anthropology at the same moment work is expanding within review and compliance, heritage preservation, user experience design, artificial intelligence—fields where social scientists are uniquely positioned to make relevant and immediate contributions. In the last several years, a number of grassroots movements, partnerships, nonprofits, and for-profit providers have formed to fill training gaps and disrupt traditional educational frameworks. Tactical skill-building and experiential learning in service of applied—not pure research—work settings are emphasized. How has the historical shift toward cultural resource management informed these new training paradigms within our sister fields of anthropology? And how are current discussions of professional, practicing and applied work impacting the way future archaeologists will be educated? Case studies from personal and professional engagements across fields and sectors will illustrate this discussion.

Crowley, Suanna (SWCA)**[325]***Discussant***Crowley-Champoux, Erin (University College Dublin)****[234]***Discussant***Crowther, Alison (University of Queensland), Chantal Radimilahy (University of Antananarivo, Madagascar), Tabibou Ali Tabibou (CNDRS, Comoros), Mark Horton (Royal Agricultural University, UK) and Nicole Boivin (Max Planck Institute for Geoanthropology, Germany)****[217]***Transported Landscapes and Globalized Foodways in the Settlement of Western Indian Ocean Islands*

Food is often used as a marker of social and cultural identity, reflecting deeply embedded traditions of taste, technology, and social relations. Crops that moved as part of migration and resettlement processes thereby often played more than an economic role, being central to the creation and negotiation of memory and identity in new social contexts. This paper uses archaeobotanical evidence from the islands of Madagascar and the Comoros in the western Indian Ocean to explore the region's dynamic history of settlement, trade, and cross-cultural interaction involving peoples from Africa to southeastern Asia. Waves of migration and exchange saw the introduction not only of new crops to the region, but methods of cultivation and social practices that formed important "bundles of knowledge" that also moved with the plants. In-progress research aimed at investigating complementary evidence of ceramic production and consumption, as well as broader landscape-level transformations resulting from the introduction of transported landscapes to these islands, is also outlined.

Crumley, Carole (University of North Carolina, Chapel Hill)**[298]***Discussant***Cruz, Patrick (University of Colorado)****[331]***Landscapes, Memory, and the Pueblo World*

Landscapes are entangled with social meaning. Societies that live on a landscape imbue it with both cultural meaning and use them as mnemonic devices in order to preserve their histories. In turn, these culturally constructed meanings and mnemonics act in a feedback loop as both formulation and preservation of culture. This is true for Indigenous societies around the world. In the Pueblo Southwest, shared landscapes continue to tie existent communities to those of the past. The Northern Tewa region of New Mexico with its highly varied topography of hills, valleys, and mountains, provide a perfect template for cultural landscapes of meaning and memory. Tewa people have been living on this landscape for at least 700 years and with such deep histories come rich cultural and mnemonic entanglements with that landscape and its viewsheds. Here I examine ancestral places of the Northern Tewa region within the context of their shared landscapes with those of living communities. I suggest that these shared landscapes can provide for long continuity of cultural meanings and memory that can inform about ancestral spaces.

Cruz-Gil, Rafael (Cornell University)**[248]***Measuring Urban Mobility and Accessibility in a Mesoamerican Context*

While spatial analysis has become commonplace in archaeology, the social implications of mobility and

accessibility in urban contexts remain an aspect that can be studied in much more depth. Drawing theories and methodologies from urban design has long been a staple for understanding the lived built environment, and while the lack of direct observation and the fragmentary nature of the data are challenging, they also present opportunities. Teotihuacan, extensively and accurately mapped since the 1970s, presents an ideal occasion for such analyses. Research along these lines, using methodologies such as Space Syntax, has already been carried out, but recent projects have produced lidar data that could be used for a precise understanding of spatial contexts that include the vertical aspects of the city, which have traditionally been hard to map and analyze even in modern environments. By bringing techniques and theories from contemporary Urban Studies, the understanding of how areas within a city compare to one another in regard to mobility and accessibility, a deeper understanding of social differentiation within Teotihuacan can emerge. I will propose how building on previous work could be accomplished using newer technologies.

Cruz Jimenez, Ricardo, and Sarah Clayton (University of Wisconsin, Madison)

[218]

Arqueología y geofísica en Chicoloapan, México: Estudios colaborativos de la vida cotidiana y la organización comunitaria después de Teotihuacan

Se presenta una investigación colaborativa que examina la organización espacial y dinámica sociopolítica de Chicoloapan, un asentamiento en la Cuenca de México, que creció durante el periodo Epiclásico (550-850 dC), después del declive de Teotihuacan. Este proyecto combina métodos arqueológicos y geofísicos para investigar una comunidad post-colapso y las prácticas cotidianas de sus habitantes. Nos centramos en el entorno edificado, considerando las formas en las que la arquitectura cívica y residencial condicionó las interacciones entre los residentes. Los estudios geofísicos realizados por Luis Barba y su equipo enriquecen nuestra comprensión de la configuración espacial del sitio, al permitir estimar las dimensiones de las estructuras y su proximidad a otras características físicas del paisaje. La arqueología combinada con la prospección magnética ha llevado a la identificación de diversas formas de arquitectura, incluidos templos, casas, además de una plaza cerrada y hundida que es la primera que se documenta en esta área. Sostenemos que un enfoque colaborativo y multidisciplinario que integre un conjunto de métodos geofísicos y arqueológicos es indispensable en la investigación de los asentamientos arqueológicos.

Cuartero, Felipe [126] see Alcaraz-Castaño, Manuel

Cucina, Andrea (Universidad Autónoma de Yucatán) and Allan Ortega Muñoz (INAH Center, Quintana Roo)

[21]

Modern Migration Theory and Their Applicability to Prehispanic Mesoamerican Populations

Modern migration theories are based on a capitalistic view of economic forces for people (mostly males) to migrate in search of better economic conditions. However, the dynamics that characterize modern times are hardly applicable to prehispanic societies. Trade between and within regions was an important force driving human mobility, so economic reasons cannot be ruled out a priori because they did represent a factor also present in ancient times. Yet, the direct analysis of individual mobility based on strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) isotopes in dental enamel provides many possible reasons behind individuals' mobility. In the prehispanic northern Maya lowlands, when nonlocal people are analyzed by sex, age at death, social status, funerary attire, and burial location, the emerging picture encompasses multiple factors. This paper argues that the equal representation of males and females and the presence of infants and children speaks in favor of families moving according to kinship networks. Nonlocal elite females suggest marriages to strengthen political networks. The presence of royals also indicates the development of outposts and the expansion of political domains. Finally, the lack of specific mortuary settings and locations for nonlocals suggests that they had been integrated into the local society regardless of their origin.

Cuellar, Lucero [306] see Flores-Blanco, Luis

Cuenca-Solana, David [247] see Straus, Lawrence

Cugini, Carla [123] see Miller, Kyra

Cui, Yinzhi

[51]

Chair

Cui, Yinzhi, Li Liu (Stanford University), Honghai Chen (Northwest University, China) and Ruilin Mao (Gansu Provincial Institute of Cultural Relics and Archaeology)

[51]

Alcohol in Complex Society in Northwest China: A Case Study from the Mogou Site (1800–1200 BC)

Research in recent years has substantiated the prevalent presence and utilization of cereal-based fermented beverages in prehistoric China. In this study, residue analysis was applied to pottery artifacts excavated from the Mogou site, which dates to approximately between 1800 BC and 1200 BC in Gansu Province, northwest China. By comparing these ancient residues with modern reference samples, we established the existence of rice beer. Through an examination of starch content, our investigation unveiled that the recipe for this alcohol primarily employed red mold qu starter as the fermenting agent, with rice serving as the principal ingredient, and possibly root plants as supplementary components. Moreover, our findings divulged the sustained consumption of rice beer over a substantial period at the Mogou site, even in the face of changing pottery styles. It is highly plausible that this rice beer held a pivotal role in both daily routines and ritualistic practices, evolving into a tradition that persisted through different eras.

Culleton, Brendan, Margaret Davis (Penn State University), Richard Rosencrance (University of Nevada, Reno) and Thomas Connolly (University of Oregon)

[176]

Radiocarbon Dating a Paraffin Contaminated Moccasin: Detection and Removal of Paraffin from Skin-Based Samples

As part of an ongoing collaboration dating ethnographic collections, the University of Oregon sent a piece of a leather moccasin to the PSU Radiocarbon Lab for dating. The moccasin was recovered in 1938 from a near-surface deposit of Roaring Springs Cave, Oregon. Another moccasin from this context produced an anomalously old radiocarbon age— 7670 ± 35 BP—and contamination from museum conservation was suspected. Ongoing research into accurately radiocarbon dating skin-based samples has resolved issues inherent in the complex chemistry of leather manufacturing (Davis et al., in press), but did not address the effects of curation practices. Conservants, insecticides, or modern material for mechanical repair can introduce additional contamination that confounds attempts to accurately radiocarbon date skin-based samples. Here we present work to identify one contaminant, paraffin, using Fourier-Transform Infrared Spectroscopy (FTIR) and to develop pretreatment methods for its removal using organic solvents and XAD purification. A set of known-age leather samples were purposefully contaminated with paraffin and the efficacy of pretreatments was evaluated with comparisons of FTIR spectra, C:N ratios, and ^{14}C content. This experiment aimed to develop a method for detecting and removing radiocarbon-dead paraffin so paraffin contaminated skin-based samples like this moccasin can be accurately radiocarbon dated.

Cullison, Jennifer

[98]

The Prevalence of Pseudoarchaeology on TikTok

The popularity of pseudoarchaeological content on the internet reveals an issue in the way academics

approach the public. To measure how quickly an individual with an interest in archaeology can be influenced by pseudoarchaeology, I conducted a preliminary study on the app TikTok. The content that is presented to the users of the app is determined by a complex algorithm which uses this information to curate ones “For You Page.” Several new accounts were created and to train the algorithm I “liked” the first 100 videos in the archaeology “hashtag.” Most of the content in this phase was well researched but there was some pseudoarchaeological content. After, I recorded and liked the first 100 archaeology related videos on the app’s For You Page. The first few videos were well researched but there was a rather immediate switch to pseudoarchaeological content. This content included topics like ancient aliens, inaccurate biblical archaeology, and giants. The data collected clearly shows the ease with which a member of the public can be persuaded by pseudoarchaeological content on apps like TikTok. For this reason, more archaeologists need to be engaging with the public in more accessible forums such as social media.

Cultura, Ivan [105] see Hills, Kendall

Cummings, Elizabeth

[206]

So Many Disks, So Little Research: The Intersectionality of Modified Ceramic Sherds

Scattered evidence across North America points to the use of a common piece of refuse and a common human desire: broken pottery and playing games. A small sherd can be transformed with minimal effort into a circular disk which can be used as game pieces, counters, or toys. They were used in indigenous sports, European colonist gambling, and as playthings by enslaved children, among many other contexts. Investigation of two likely disks found at a multicomponent archaeological site in Somerset, Massachusetts yielded few relevant results; as such, their varied origins and transformations over time may be richer and more complex than is currently understood. This paper explores the untapped research potential of these enigmatic artifacts, especially in New England. With further study into the use and prevalence of modified sherds such as these, we can broaden our understanding of material interactions with cultural dynamics. Class, race, and gender show up in every area of life—even the small, broken pieces.

Cunningham, Andreana (Boston University)

[47]

3D Skeletal Digitization as a Tool for Collaborative Artistic Commemoration

Facial approximation is a salient tool in archaeology that aims to estimate the likeness of past peoples based on historic, anatomical, and artistic evidence. This project used an iterative and community-oriented approach to 2D manual facial approximation for three decedents buried at Rupert’s Valley Burial Ground in St. Helena. Rupert’s Valley is a nineteenth-century enslavement era archaeological site containing the burials of formerly enslaved “Liberated Africans.” This project was conducted in collaboration with St. Helena community partners and artists to create commemorative images for the site following its reburial in 2022. In preliminary planning sessions, an adult man, adult woman, and child from the site were selected for approximation. Based on community feedback, several portraits were created for each decedent to embrace the interpretive nature of the project. The decedents’ skull fragments were 3D surface scanned, and then virtually reconstructed and layered with facial muscles and tissue depth markers in 3D Slicer. These files, historical context images, and a reconstruction guide were shared with the artists to guide their portrait creation. The iterative process of portrait creation has provoked artists and community members to reflect on the sobering nature of the site and its importance as a cultural landmark.

Cunningham, Timothy (Université catholique de Louvain)

[132]

Praxis Makes Perfect? The Archaeological Correlates of Social Failure in Minoan Crete

In a 2017 paper on architectural failures in Minoan Crete I suggested that these reflected a greater focus on

signification than on engineering. Still failures, as drains that need refitting and paving that needs replacing cannot be seen otherwise; but a deeper, more nuanced understanding of the underlying purpose of these projects provides insight into sociocultural and political conditions. Likewise, ceramic failures—overproduction, malformed and misfired vessels, breakdowns in assembly—suggest the real “product” was not simply a sufficient supply of functional and aesthetically pleasing storage, cooking and table wares. Through the lens of Social Entanglement theory (Cunningham 2023) it becomes clear that these outcomes reflect the needs of the polity to entangle its constituents and prevent fissioning; economic production thus becomes social reproduction. A polity such as Minoan Crete, that depends on entanglement for its survival, will also require social leveling to finesse status inequalities. For example, destroyed and/or abandoned buildings might also reflect punishment for transgression; and ritual abasement, lamentation, and atonement, as reflected in the iconography, may demonstrate the need for elites to publicly process social transgressions or failures of office, real or potential.

Cureton, Travis (Logan Simpson) and J. Andrew Darling (Logan Simpson)

[88]

When Isn't a Va'aki? Additional New Perspectives on Ancestral O'odham Ceremonial Architecture

Scholars of the Hohokam archaeological culture area have worked for decades to build a more comprehensive explanatory framework regarding the interpretation of *vapaki*, or ancestral O'odham ceremonial houses. In 2023, an edited volume of the same name was published and represents a step forward in that effort. That volume explores the archaeology of platform mounds in Arizona, the role of O'odham oral history and continuity with their *huhugam* (ancestors). We contribute to this ongoing effort by combining archaeological data recovered from a structure known as Feature 7 at AZ U:9:165(ASM) in downtown Tempe, Arizona, with ethnographic research on contemporary O'odham concepts of ceremonial architecture. Our analysis focuses on Feature 7's internal architecture, the surrounding O'odham landscape and the interrelationship of architectural characteristics with O'odham worldview and ceremony. Our results reinforce previous findings while examining the primordial aspects of ceremonial architecture that help transcend cultural historical frameworks and emphasizes historical continuity and the role of O'odham perspectives in archaeological interpretation.

Cureton, Travis [281] see Phillips, Bruce

Currás Refojos, Brais [298] see Sastre Prats, Ines

Curry, Anne

[206]

Searching for Archaeological Evidence of Roque Madrid's 1705 Campaign and Navajo Resistance in Northwest New Mexico

In 1705, Spanish commander Roque Madrid led a group of soldiers and Pueblo allies on a 20-day excursion through the traditional Navajo homeland in northwest New Mexico. The goal of this excursion was to burn Navajo cornfields and resources as punishment for raiding and general resistance. Madrid kept a campaign journal during these days, describing the route traveled as well as different skirmishes with Navajo fighters. This journal was translated and published in 1996 by Rick Hendricks and John P. Wilson. The location of one violent encounter between Madrid's army and Navajo resistance is described to be at the confluence of Tapicito Creek and Cañon Largo. This confluence is, in part, currently on land managed by the New Mexico State Land Office (NMSLO). This presentation will describe the investigation of the location and the attempt by NMSLO archaeologists to locate any remaining material evidence of this battle. Methods include a complete archaeological survey of the area in question and subsurface testing.

Curry, Anne [269] see Ortega, Ethan

Curry, Jonathon [88] see Burger, Rachel

Curta, Florin

[22]

Pastoralism and Nomadism: An Archaeological Bifurcation

Despite great advances in the archaeology of nomadism, in Eastern Europe, medieval nomads are still associated archaeologically with burials in prehistoric barrows, along with horses or parts of the horse body. Huns, Avars, and Magyars are all labeled “nomads,” but the actual conditions for nomadism in the Carpathian Basin are quite restrictive. Meanwhile, great advances in zooarchaeology have changed the terms of the discussion, with a greater emphasis on pastoralism. Nonetheless, the archaeology of medieval transhumant pastoralism in the Balkans is still in its infancy. A major point of bifurcation is slowly, but steadily taking shape in the research on medieval nomads and pastoralists.

Cusicanqui, Solsire (Harvard University), Sadie Weber (Universidade de São Paulo), Jose Bello (Proyecto de Investigación Arqueológica Santa Apolonia) and Percy García (Proyecto de Investigación Arqueológica Santa Apolonia)

[81]

Cultural Continuity and Ritual Significance: Apu Illaorco (Iscoconga) and Apu Rumitiana (Santa Apolonia) in Focus

This presentation unveils the findings of more than eight years of research in the Cajamarca Valley, focusing on two distinct Caxamarca sites from the Early Intermediate and Middle Horizon periods. Iscoconga or Apu Illaorco, investigated since 2017, served as a center for pottery production and pastoralism. The site boasts an abundance of pottery that defined the Caxamarca economy and local identity. Simultaneously, the presence of camelids underscores their significance in site development, as they served as vital contributors to both the production of raw materials and transportation, thereby fortifying the economy and supporting the local population. In contrast, recent archaeological excavations at Santa Apolonia Hill, Apu Rumitiana, shed light on a public/ceremonial Caxamarca center. It comprises plaza spaces with evidence of pilgrims, food and textile production areas, and funerary contexts. A multidisciplinary approach has allowed for the comparison of activities at both sites, offering insights into the social and economic processes of each. This contributes significantly to our comprehension of Caxamarca society in the Cajamarca Valley during these periods.

Cusicanqui, Solsire (Harvard University)

[208]

Discussant

Cusimano, Daniel [199] see Mogauro, Megan

Custer Bojakowski, Katie [47] see Palomino Berrocal, Raul

Cutright, Robyn (Centre College), Sarah Taylor (University of South Florida) and Gabriela Cervantes Quequezana (University of Pittsburgh)

[53]

Monte Lima, a Tallán Community in Late Intermediate Period Chira Valley, Peru

Monte Lima is one of five large Late Intermediate sites in the lower Chira Valley described by Richardson et al. (1990) as representing a surge in local complexity resulting from Sicán and Chimú expansion to the far north coast. In 2023, we conducted preliminary excavations across this multicomponent site to establish chronology, better understand stratigraphy and preservation, and begin to explore the roles of state

conquest and interregional exchange in shaping local social and political organization. Fieldwork and visits to local community museums revealed that local Tallán ceramics and architectural elements were abundant at Monte Lima. Most of what we know about the Tallán culture comes from colonial period records of their language, their interactions with Pizarro's invading forces, and their politically powerful women, called *capullanas*. Little archaeological literature so far has explicitly addressed the Tallán. In this paper, we report on our first steps toward recognizing Tallán presence at Monte Lima and characterizing local interactions with the powerful states and trade networks of the Late Intermediate period Andes.

Cutright, Robyn (Centre College)

[208]

Discussant

Cvecek, Sabina (Field Museum; Austrian Archaeological Institute)

[116]

Beyond Kinship Trees: Capturing the Social Tapestry in European Prehistory

While kinship studies based on ancient DNA (aDNA) data have been instrumental in reconstructing biological relationships in European prehistory, they often overlook the complex web of social interactions that shaped prehistoric communities. This interdisciplinary investigation delves into the rich tapestry of social dynamics that characterized European prehistoric societies. Drawing from archaeological, sociocultural anthropological, and archaeogenetic data, the project aims at unveiling a multifaceted approach to deciphering social organization. It emphasizes the significance of non-kin relationships, such as alliances, friendships, and hierarchies, which have been underrepresented in previous studies. Following a mixed method approach, the project sheds light on the intricacies of interpersonal connections, economic exchanges, and ideological affiliations within and between communities. The project showcases the importance of moving beyond simplistic kinship tree models to unravel the intricate social fabric in current aDNA studies in European prehistory. By embracing a holistic perspective, by integrating qualitative ethnographic data and quantitative data, the project highlights the importance of understanding how these societies created and broke social relations beyond those created by blood.

Cybulski, Jonathan (Smithsonian Tropical Research Institute), Nicole Smith-Guzmán (Smithsonian Tropical Research Institute), Luis Sánchez Herrera (Museo Nacional de Costa Rica, San José), Kelton McMahon (University of Rhode Island) and Ashley Sharpe (Smithsonian Tropical Research Institute)

[222]

Investigating Human Subsistence Strategies in Panama during the Late Holocene

Subsistence strategies and foodways were at the heart of Richard Cooke's and colleagues' pioneering work in Panama. Early work found that shifting resource reliance (terrestrial and marine) had impacts on the evolution of these early peoples' cultures and potentially the surrounding ecosystems. Therefore, subsistence in this region has important historical and ecological implications, such as agricultural plants being transported during their domestication process, and marine resources changing with regional productivity. However, to date it has been difficult to separate these different foodways given analytical limitations. We examine the evolution of human diets ($n > 60$) across the Panamanian Isthmus over the last 6,000 years using classic $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ values of bulk isotopes of collagen coupled with cutting-edge compound-specific isotope analysis of amino acids, which can identify the main protein and energy sources, and trophic position of people. Regardless of site, bulk and amino acid $\delta^{13}\text{C}$ values showed a clear sex divergence, with males consuming more maize. Interestingly, $\delta^{15}\text{N}$ values vary by site and temporal period, suggesting differing subsistence strategies and reliance on coastal resources. This work improves our ability to distinguish terrestrial and marine diets, better enabling us to unravel the interplay between human subsistence practices and the environment.

Cybulski, Jonathan [222] see Smith-Guzmán, Nicole

Cyr, Howard (GeoArch Solutions LLC)**[336]***Discussant***Czaplinska, Tina (University of Montana) and Meradeth Snow (University of Montana)****[68]***Nondestructive DNA Sampling Method of Human Teeth*

DNA acquisition from skeletal remains reveals a wealth of information that observational analysis alone does not offer. Researchers can glean an individual's ancestry, lineage, and biological sex and review genetic diversity. However, most current methods require some form of destruction to extract genetic material, which can dissuade entities (museum curators, living and descendant communities) from allowing this research to occur. The damage caused by destructive extraction methods can also limit additional DNA research. This study has developed and refined a nondestructive method for extracting DNA from human teeth to address these concerns and encourage future genetic research. Using nontoxic materials, the resulting tooth will also remain nontoxic, unlike in many other protocols. This project will build on the nondestructive DNA extraction method established by Essel et al. (2021, 2023) using sodium phosphate buffer (0.5M), amicon ultra-4 centrifugal filter (with ultracel-3 membrane), and a purification step to obtain a single-stranded extract. However, the application and utility of this method on human remains and the resultant ability to obtain usable genetic material have not been completed, and the methods have been adapted to typical anthropological genetics downstream applications. The results have implications for forensic and ancient genetic contexts.

Czére, Orsolya (University of Aberdeen), Baukje de Roos (Rowett Institute, University of Aberdeen), Eléa Gutierrez (University of Aberdeen), Gary Duncan (Rowett Institute, University of Aberdeen) and Kate Britton (University of Aberdeen)**[334]***Integrating Isotope Analysis with Empirical Measures of Vitamin D Status: New Directions in the Study of Diet and Deficiency*

Stable isotope analytical techniques are increasingly employed alongside other innovative methods to gain a fuller understanding of past life-histories. Recent developments in biomedical sciences have offered noninvasive means of quantifying vitamin D status in individuals through the determination of 25(OH)D₃ content in hair. Vitamin D deficiency is linked to a wide range of adverse health effects, the risk of which is increased at latitudinal extremes where limitations are placed on the dermal synthesis of vitamin D₃ due to insufficient sunlight, particularly during winter. The consumption of food sources with high vitamin D content can mediate this risk, including salmon, marine fish, and marine mammals. Where hair is preserved in the archaeological record, these novel methodologies may not only allow an empirical indication of vitamin D status but also reveal the relationship between diet and vitamin D health. Here, we present novel intra-strand 25(OH)D₃ data from modern individuals and the first archaeological applications. The detection of seasonal variability ($\delta^{18}\text{O}$) of 25(OH)D₃ content in incremental samples of hair, in tandem with the analysis of dietary ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$) indicators, provides evidence of the links between ancient (seasonal) diet and vitamin D status for the first time.

Czujko, Stephen (Archaeometry Laboratory, MURR), Virginie Renson (Archaeometry Laboratory, MURR), Michael Glascock (Archaeometry Laboratory, MURR), Maria Verde (Università degli Studi di Napoli Federico II) and Marcus Rautman (University of Missouri)**[121]***Assessing the Origin of Wares from Sardis through Sr-Pb Isotopic Analysis*

This paper presents the results of isotopic analysis of ceramic sherds and locally sourced soils that contribute to our understanding of the origin of ancient Sardis's ceramic corpus and help clarify the site's role within the larger interaction network of western Anatolia. A previous study employing neutron activation analysis (NAA) of ceramic sherds from the site identified 10 discrete compositional groups; however, the origins of

some sherds remained unclear. The current study employed strontium isotopic analysis of sherds from one of the ambiguous types, Asia Minor Light-Colored, to determine whether the specimens represented local or nonlocal wares. Additional analyses incorporating strontium and lead isotopic analysis of the same selection of sherds in addition to local soils are presented as a method for relating the ceramic specimens to their geological source of origin.

D'Agostini, Francesca (Pompeu Fabra University, Spain), Abel Ruiz Giralte (Pompeu Fabra University), Javier Ruiz Perez (Pompeu Fabra University), Marco Madella (Pompeu Fabra University) and Carla Lancelotti (Pompeu Fabra University)

[288]

Predicting Water Availability from Phytolith Assemblages of Finger Millet, Pearl Millet, and Sorghum

The interpretation of water management practices and the use of irrigation for agricultural intensification has been central to the archaeological debate. Until now no direct method has been presented for the discrimination of water availability for C₄ cultivated crops, representing the main components of the agricultural package in drylands. In this study, phytoliths are suggested as possible proxies to overcome the methodological issue. Experimental cultivations of traditional landraces of sorghum, pearl millet, and finger millet have been conducted, simulating irrigated and rainfed fields in drylands. Morphotypes concentration and ratios in relation to water availability have been investigated from different plant tissues and a prediction model was tested on the basis of the results obtained. The model built on phytolith composition has been applied to four different archaeological deposits of the Mature phase of the Indus Civilization: Harappa, Kanmer, Shikarpur, and Alamgirpur with the aim of formulating new hypothesis on the land use strategies. Additionally, the same model has been used to test the potential extent of finger millet and sorghum agriculture in the northern Horn of Africa region during the Aksumite Kingdom; that is, the period when finger millet and sorghum are first documented in the macro- and microbotanical record.

Dakin, Karen

[11]

Discussant

Dalan, Rinita [24] see Greenlee, Diana

Dalan, Rinita [283] see Hargrave, Michael

Dalantai, Sarantuya [130] see Farquhar, Jennifer

Dalantai, Sarantuya [23] see Rosen, Arlene

D'Alisera, Alexander (Boston College)

[91]

Apophatic Archaeology: The Materiality, Phenomenology, and Textuality of Caves in Early Medieval Britain

Although most discussions surrounding humans and caves in Britain begin in prehistory and end with the Roman period, archaeologists have uncovered evidence for early medieval activity across the island. Still, early medieval historians face a methodological problem in which—compared to the preceding eras—the quantity of archaeological evidence for cave presence declines substantially, just as the textual record increases and begins to flourish with underground references. At once, this paper seeks to address this evidentiary quandary from a jointly archaeological and historical perspective. First, I draw on established frameworks such as the archaeology of atmosphere, phenomenology, and the archaeology of darkness to argue for an “apophatic archaeology” that acknowledges absences in the underground material record as meaningful. Deploying this experimental framework with reference to British cave sites, I propose that the “imagined” underground, as uncovered in early medieval texts, must be read with and against the “real”

underground, evidenced by both archaeological discoveries and present-day phenomenological encounters with caves. Above all else, this paper aims to bridge the disciplines of archaeology, literature, and history in order to further scholarly exploration of underground encounters in the early medieval British milieu.

Dall, Amelia (Texas State University)

[64]

Discussant

Dalmas, Daniel (University of Utah) and Lawrence Todd (Colorado State University)

[265]

Methods, Models, and Movement: Examining Multiple Trace Element Dataset to Explore Past Land-Use Dynamics

Differential use of obsidian sources by precontact peoples has been used to infer mobility patterns and occupations in the Absaroka mountains, Wyoming. Identifying sources of obsidian involves measuring the relative abundances of trace elements using eXRF and analyzing clusters to differentiate sources. Using a large dataset of 1,842 obsidian artifacts, assembled by the GRSLE project, sourced using eXRF coupled with pXRF scans we assembled a logistic Bayesian model for predicting obsidian sources using just the results from pXRF. The model can identify samples from Obsidian Cliff in Yellowstone National Park with a better than 0.99 confidence. Using this modeling method and pXRF data greatly increases the feasibility in sourcing large assemblages of obsidian and provides a baseline for expanding our regional record.

Dalton, Jesse and F. Kent Reilly III (Texas State University)

[135]

Yucatecan and Mesoamerican Influences on Taino Ceremonial Iconography

The iconographic corpus of the Taino cultures has been the focus of recent scholarship, yet as a whole remains understudied within Caribbean archaeology. Scholars in the past attempted to demonstrably link the Taino to the Late Postclassic Maya with limited success. However, Yucatecan influences are evident within the spatial layout of Taino ceremonial architecture of batey ballcourts, as well as from the presence of certain objects observed on Taino archaeological sites, such as stone yokes and jadeite celts. Through examinations of the Maya “muyal” glyph and similar motifs expressed in post-Saladoid Taino media, such as Cohoba snuffing tools, elite regalia, rock art, and zemis, this research suggests there exists a correlative meaning imbued within these symbols that allowed the religious actors who ritually utilized them to sequester preternatural powers to access ancestral realms. It is without question that the particular meaning inscribed in Taino motifs represents components of a unique and distinctive religious system that developed within the Greater Antilles. However, these symbols may have carried a prescribed meaning derivative from Late Postclassic, and by extension earlier Maya and Olmec cosmological ideology, which diffused through a bilateral regional interaction sphere based on long-distance maritime trade.

Dalton, Jordan (American Museum of Natural History), Alexis Rodríguez Yábar (University of South Florida), Irving Aragonéz Sarmiento (Universidad Nacional San Luis Gonzaga de Ica), Tiffany Tung (Vanderbilt University) and Nessel Jurado (Universidad Nacional San Luis Gonzaga de Ica)

[281]

Urban Organization and Agricultural Practices at Las Huacas, Chincha Valley (AD 1100–1570)

In modern times the Chincha Valley is one of the most productive agricultural valleys of Peru, and its offshore islands were rich in guano—bird excrement that is a potent fertilizer—that was exploited by foreigners from the Colonial into the Republican periods (AD 1523–1879). While the importance of the valley’s agriculture and resources is well known throughout history, how agriculture was practiced in the valley during prehistory is not well understood. Historic accounts state that the Chincha were an important province under the Inca and that groups lived in specialized settlements of fisherman and farmers, but there is no detail

on how land use was organized under the Inca (AD 1400–1532) and during the preceding Late Intermediate period (AD 1100–1400). Furthermore, exactly when and how residents began using guano as a fertilizer has not been addressed. This poster presents new excavation data from the site of Las Huacas (a 100 ha agricultural center) that provides insight on the sequence of occupation at the site and site organization. This data is then paired with isotopic data from plant, animal, and human remains from previous excavations that can shed light on the use of guano.

D’Altroy, Terence (Columbia University)

[146]

Discussant

Dame, Evan [14] see Woehlke, Stefan

Damlund, Camilla [324] see McNutt, Ryan

Daneels, Annick (IIA-UNAM Mexico)

[216]

Chair

Daniel, Christopher (Advisory Council on Historic Preservation)

[144]

Discussant

Daniel, I. Randolph [253] see Miller, D. Shane

Danielson, Andrew [174] see Foran, Debra

D’Aprix, Michael (UCL Institute of Archaeology), Nicola Sheyhing (Independent Researcher) and Jesper de Raad (Municipality of Nijmegen)

[184]

The Reality of Commercial Archaeology for Early Career Archaeologists

This paper will present the outcomes of a second survey of European and world archaeologists intended to understand and explore the realities of early career archaeologists in commercial settings. The first survey conducted by the European Association of Archaeologists Early Careers Archaeologists Community focused only on academic archaeologists while this survey is exploring all non-academic archaeologists. Preliminary findings show concerning trends in the US, UK, and across Europe for early career archaeologists. Major findings including increasing levels of education requirements with multiple degrees at the same level (i.e., two or more master’s degrees), large periods of prolonged unemployment and chronic underemployment leading to large numbers of archaeologists becoming reliant on non-archaeological part-time jobs, and an unsettlingly high number of archaeologists completing professional work that is unpaid. Additional preliminary findings suggest that almost half of those surveyed have felt disadvantaged because of their personal background or attributes while another half of archaeologists surveyed reported being advantaged because of those same traits, e.g., gender, sexuality, ethnicity, or economic background. These are difficult findings and trends to examine, and this paper will break down these trends and other findings from the survey once it has come to a conclusion.

Darbyshire, Samuel (Morehead State University), Jaxson Brewer (Morehead State University) and Timothy Hare (Morehead State University)

[172]

Visualizing Mayapán's Outlying Centers and Regional Distribution

We present the identification and analysis of the outlying minor centers surrounding the Postclassic city of Mayapán in the 44 km² area of the 2013 Mayapán lidar Survey. The centers were identified in the airborne laser scanning (ALS) data, and all were ground-checked. In this presentation, we display the major architectural and environmental features and their spatial arrangement for each minor center. Most previous research in the area focused on the two centers within the urban core, but we seek to build a better understanding of the diverse manifestation of minor centers distributed in the rural area surrounding the city. We evaluate the form and organization of each center to characterize their variation using systematic procedures to identify the fundamental structures and environmental features in each and identify key similarities and differences among them. We explore the minor centers' potential relationships within the broader polity to gain a greater understanding of political and economic activities in the Mayapán region. We use this analysis to enhance our understanding of regional interconnections and shift the focus of analysis from the isolated city to the broader relationships connecting people at multiple settlement levels and to support further research in and around Mayapán.

Darling, J. Andrew [88] see Burger, Rachel

Darling, J. Andrew [88] see Cureton, Travis

Darling, J. Andrew [88] see Garraty, Christopher

Darmangeat, Christophe (TRACES) and Jean-Marc Petillon (CNRS-TRACES)

[306]

The Bow That Wasn't: On the Absence of the Bow in Aboriginal Australia

The nearly worldwide diffusion of the bow is often interpreted in terms of its superiority over other weapon systems. There is, however, at least one exception to this diffusion: Australia, where this weapon was never locally invented, and never spread from neighboring regions, although Aboriginal Australians near the Torres Strait were in contact with populations that used this weapon. Based on ethnographic literature and the comparative assessment of weapon systems, this presentation investigates the reasons for this situation. We suggest that, in the local conditions where Aboriginal Australians witnessed the use of the bow, this weapon did not present significant advantages over the spear-thrower, precluding its adoption and even triggering a reverse movement (spread of the spear-thrower among Torres Strait Islanders previously using the bow). In other parts of Australia, where the use of the bow might have proved advantageous, its non-invention might illustrate the rule that invention events for this weapon (vs. adoption through diffusion) are globally rare, if not unique. The evolution of weapon systems must be approached through local scenarios encompassing conditions of use and the history of techniques, rather than viewed as a reflection of cognitive capacities or of the intrinsic parameters of each weapon.

Darras, Véronique (CNRS - University Paris I Pantheon-Sorbonne)

[240]

Chair

Darras, Véronique (CNRS - University Paris I Pantheon-Sorbonne)

[240]

The Turbulent Archaeological History of Relations between Chupícuaro and Cuicuilco Revisited through Ceramics: An Overview

The study of interregional social relations is a subject that has been explored extensively by Mesoamerican archaeology and has traditionally relied on similarities between their respective material productions, especially pottery. During the twentieth century, stylistic analogies concerning ceramic materials between

Chupícuaro in the Lerma valley (Guanajuato) and Cuicuilco in the Basin of Mexico, led to diverse interpretations involving population movements, commercial interactions, and ideological influences, which often granted Chupícuaro a primal position as a possible area of emigration or as a prominent ceramic production center disseminating its beautiful products over long distances. After a brief overview of these different interpretations, we present the issues and challenges of the CHUPICERAM project that seeks to renew our understanding of these relations by fully exploiting the information potential of the ceramic production processes, from the raw materials acquisition strategy to the finished product.

Darras, Véronique [240] see Alloteau, Fanny
 Darras, Véronique [240] see Cabadas Báez, Héctor Victor
 Darras, Véronique [240] see López Puértolas, Carlos

Darwen, Christyann [268] see Driscoll, Brooke

Dashzeveg, Bukhchuluun (Yale University)
[23]
Chair

Dashzeveg, Bukhchuluun [23] see Cameron, Asa

Datunashvili, Giorgi [38] see Zimmerman, Michael

Davenport, Christian [229] see Napora, Katharine

Davenport, James (University of Missouri), Frances Hayashida (University of New Mexico), Brandi MacDonald (University of Missouri) and Jeffrey Ferguson (University of Missouri)
[255]

The Production of Blackware Pottery at Pachacamac and the Lurín Valley, Peru, during the Late Horizon: A Multi-method Approach

While pottery made to look black has existed in many regions in the Andes and through many time periods, the style sees widespread distribution and use during the Late Horizon, particularly in Inka contexts. Often made through firing in a reducing environment, blackware was a style common to the Chimú Empire (located on Peru's north coast), which was subjugated by the Inkas. Ethnohistorical and bioarchaeological evidence has also shown the forced resettlement of Chimú potters to other subject territories under Inka rule, working in these new locations to produce pottery in imperial decorative styles. Simultaneously, local potters in subject territories paid tribute to the Inka empire through the production of Inka styles of pottery, emulating the forms and designs but using their traditional technologies for production. In this study, we examine the production of blackware pottery using thin section petrography, neutron activation analysis, and raman spectroscopy to address several questions: where was this pottery produced, and what techniques were used to produce it (and how do these relate to other styles of pottery local to the region)? And how was the polished black finish of the pottery achieved?

Davenport, James [37] see Echenique, Ester

Davidson, Matthew [319] see Bonzani, Renee

Davies, Benjamin [126] see Reeves, Jonathan

Davies, Simon

[247]

The Role of Transferable Techniques in the Process of Innovation in the Paleolithic

This paper will evaluate the role of transferable techniques in Paleolithic technical innovations. I shall consider the interlocking technical aspects of mastic, ceramic, ground food, and pigment production, together with the technical overlaps in working wood and osseous materials. In addition, I shall consider the potential local availability of key raw materials, and the implications for direct procurement, exchange, and curation.

Davis, Caitlin (Yale University)

[276]

Usulután Pottery in the Southern Maya Region: Paste Composition and Potting Communities

Usulután is a type of resist-decorated pottery which was a prominent component of the ceramic assemblage for many Late Formative archaeological sites in the Southern Maya Region. Originating in Western El Salvador, this resist decoration is found on serving wares across Mesoamerica. This paper presents the results of compositional analyses of Usulután pottery in the Southern Maya Region and theorizes on the relationships between potters and potting communities that facilitated the spread of this pottery style. Integrating INAA and PXRF data with discussions of style and form, this paper will discuss the possible relationships between potting communities in the Southern Maya Region.

Davis, Dylan (Columbia University) and Kristina Douglass (Columbia University)

[190]

Traditional Subsistence Economies on Southwest Madagascar Have Long-Term Impacts on Ecological Productivity

The environmental impacts of human societies are generally assumed to correlate with factors such as population size, whether they are industrialized, and the intensity of their landscape modifications (e.g., agriculture, urban development, etc.). As a result, small-scale communities with subsistence economies are often not the focus of long-term studies of environmental impact. Having a clear understanding of the ways different communities at different scales interact with and shape the environment can help us effectively support communities co-designing and maintaining sustainable relationships with their environments today. On Madagascar, ecological and cultural diversity provide a unique case study to examine the role of diverse socioeconomic practices (e.g., fishing, foraging, and herding) on long-term ecological (in)stability. In this study, we use high-resolution remote sensing datasets and machine learning to compare long-term ecological impacts of different human livelihood strategies in SW Madagascar. Our results indicate that while human-environmental dynamics between different socioeconomic communities are similar, but these strategies can be identified in geophysical data using machine-learning classifiers. Furthermore, we find that traditional ecological practices have become integrated into the very fabric of ecological systems in SW Madagascar and help serve roles in environmental resilience.

Davis, Kaitlyn (Northern Arizona University; Chronicle Heritage), Jeffrey Ferguson (University of Missouri) and Laure Dussubieux (Field Museum of Natural History)

[50]

Sourcing Surface Treatments on Whiteware Ceramics from Southeast Utah Great House Communities

Previous elemental research on ceramics from Chacoan Great Houses in southeast Utah produced unexpected results. Whereas painted whiteware serving bowls are traditionally thought more likely to be traded or procured from further away than grayware cooking pots, neutron activation analysis (NAA) of the ceramic pastes of whiteware and grayware sherds from these communities found the opposite. This poster presents the results of a follow-up 2018 laser ablation-inductively coupled plasma-mass spectrometry (LA-ICP-MS) analysis of surface treatments (slips and paints) of a subset of the same whiteware sherds. The goal

of the study was to determine if the source areas and procurement groups suggested by chemical signatures of the surface treatments (slips and paints) corresponded with those previously determined for the paste of the sherds. The results indicated there was no grouping of slip clays into distinct source-area groups and that paints could not be grouped beyond carbon/mineral distinction, suggesting less distinction and less grouped variation in slip and paint recipes than in paste recipes. Understanding the composition and sourcing of surface treatments provides insights about the nature of pottery production and trade in the ancient Southwest, including revealing differences in procurement networks for different components of pottery production.

Davis, Kaitlyn (Northern Arizona University; Chronicle Heritage)

[254]

Chair

Davis, Kaitlyn [254] see Larkin, Karin

Davis, Kaitlyn [206] see Ortman, Scott

Davis, Loren (Oregon State University), Masami Izuho (Tokyo Metropolitan University), Alexander Nyers (Northwest Archaeometrics), Fumie Iizuka (University of Missouri) and David Madsen (University of Nevada, Reno)

[306]

Exploring Potential Connections between Pleistocene Bifacial Projectile Designs in Japan and North America: A First View

While paleogenetic studies indicate that the majority of the genomic heredity of indigenous peoples of the Americas can be traced to late Pleistocene human populations in far eastern Asia, we do not yet understand whether a cultural connection exists between this region and the Americas. To study this issue, we began a project to characterize and compare key cultural markers found in the design and modes of manufacture in lithic technology presented in the artifacts from late Pleistocene sites of Japan and North America. Here, we present a first view of our work on studying bifacial lithic projectile point technology from the Shirataki Valley region of Hokkaido. We discuss the use of digital 3D scanning methods and geometric morphometric approaches to elucidate design and manufacturing elements encoded in bifacial projectile points and explore next steps for research.

Davis, Loren [316] see Newell, Zachary

Davis, Loren [197] see Recklies, Laura

Davis, Loren [262] see Wriston, Teresa

Davis, Margaret [176] see Culleton, Brendan

Davis, Maxwell [334] see Yalcin, Tugce

Davis, Oliver [334] see Bricking, Adelle

Davis, Skyler [179] see Levin, Maureen

Davis, Terressa

[180]

Discussant

Davis-King, Shelly (Davis-King & Associates)**[87]***Climate Change and Other Effects to Aboriginal Medicine*

America's first people have been extremely knowledgeable about animals, plants, and fungi they ingest and/or breathe in for medicinal purposes. Medicine, from a Native perspective, is something honored, taken in for healing and well-being, to be used with respect and knowledge, with spiritual reverence and recognition of cultural continuity. Recent changes in climate have affected medicine pollinators, habitat, cross-species interaction, and traditional access while medicinal species degradation and eradication of species considered "pests" or "invasive" has affected the health and even survival of Native American communities. A decrease in the natural quantity of the species due to climate change is further exacerbated by cultural appropriation and poaching of species glorified through social media. Medicine locales often go unnoticed by the archaeological surveyor and thus become even more threatened.

Davis-Robinson, Lachlan [256] see Pugliese, Melanie

Dawson, Emily (University of Texas, Austin)**[256]***Party on the Plaza: Risk and Resilience in Seventeenth- and Eighteenth-Century New Mexico*

Spanish colonial efforts in New Mexico began in 1598 with the establishment of a capital in Santa Fe, as well as missions, ranches, and farms. Documents from the early colonial period (AD 1598–1680) are rife with colonists' concerns about the New Mexican environment, indicating struggles at the household scale to establish European-style agriculture in New Mexico. Eventually, mismanagement of the colony and cruel treatment of the local Pueblo peoples led to the 1680 Pueblo Revolt and the first colony's abandonment. In 1692, the Spanish Crown recolonized New Mexico. Returning colonists faced major disruptions in the form of the rise of the Comancheria. However, in spite of these challenges, the second New Mexican colony proved more resilient. I examine plant microremains (phytoliths), macrobotanical remains, and ceramics from two sites, a LA20,000 (a seventeenth-century ranch) and the Plaza del Embudo (an eighteenth-century settlement) in order to reconstruct risk-management practices among the colonists. I explore the ways that seventeenth-century Spanish colonial risk management strategies differed from those of the eighteenth century and suggest that the colonists second colonial was more successful because of their greater knowledge of the local environment and stronger community ties.

Dawson, Peter (University of Calgary), Remi Mereuze (University of Calgary) and Max Friesen (University of Toronto)**[168]***Laser Scanning and Preservation of House A3H5 at Kuukpak: A Study of Excavation and Archaeological Monitoring in an Arctic Environment*

Archaeological research at the Kuukpak site in the Mackenzie Delta represents a compelling case study in the face of climate change-induced coastal erosion. We offer an in-depth analysis of the innovative use of laser scanning technology in the excavation and preservation of the Kuukpak A3H5 semi-subterranean house. Our study focuses on the comparison of laser scans taken at the end of the excavation season in 2014 and the subsequent reopening in 2016. The primary objective is to examine how the permafrost environment impacts wood preservation and decay dynamics. By analyzing high-resolution laser scans, we scrutinize changes in the wood elements and analyze them with information recorded during the excavations. This taphonomic analysis allows us to discern the extent of wood decay, identify potential preservation challenges, and gain insights into the complex interplay of the multiple factors contributing to degradation. Our findings offer critical implications for understanding wood deterioration in permafrost regions, advancing our knowledge of preservation and long-term excavation strategies, and informing future research at similar archaeological sites. Furthermore, our study underscores the invaluable role of laser scanning as a tool for documenting, monitoring, and safeguarding the cultural heritage of vulnerable sites in the face of climate change.

Day, Dominic [172] see Howell, Cameron

De Anda, Guillermo (Instituto Nacional de Antropología e Historia [INAH])

[221]

Following the Path of Dead in Chichen Itza through a Unique Modified Skull

During the Terminal Classic and Postclassic periods, Chichen Itza became an important pilgrimage center. People from all over Mesoamerica came to the Maya Lowlands to make special offerings to Chichen Itza's sacred well. Paleoclimate studies indicate that a severe drought occurred during that period of time. This may have lasted a decade or more. During that time, offerings of all kinds to the Sacred Cenote increased. Many different kinds of objects such as ceramic objects, jade, turquoise, and especially human sacrifices were offered to Chac the rain god. After analyzing the human remains from the bone collection situated at Mexico City's Museum of Anthropology, we explored several more cenotes. In one of them, situated at the west of the City of the Itza, we documented an interesting modified human skull. I will describe in this session the documenting of such a rare and important object.

De Bonis, Alberto [121] see Renson, Virginie

De Cespedes, Manuel, Karen Harry, Liam Frink and Brian Hedlund

[103]

The Role of Fire-Processed Limestone at the Shivwits Plateau, Arizona

This study explores the role of limestone as a potential element in hide working among the Virgin Puebloan Branch people who inhabited the Shivwits Plateau, Arizona, in precontact times (~300 BC–AD 1200). Hide working is generally a female related activity that is lacking research in archaeology. This study demonstrates the importance of researching women-related activities to understand better the myriad of ways in which materials such as limestone could have been used in precontact times. To accomplish this goal, (1) this study reports on archaeological evidence of fire processed limestone at the Shivwits Plateau, (2) provides an overview of some of the ancient and modern uses of limestone associated with hide processing, and (3) presents an experimental study to test the effects of fire-process limestone on hide working. The results show that using limestone expedites the depilation of hides and provides antimicrobial properties. Furthermore, this study makes the case that fire-processed limestone could have been used by the Virgin Puebloan Branch people for hide working.

De Gregori, Mara [226] see Ingalls, Victoria

De La Cova, Carlina (University of South Carolina)

[7]

Past Transgressions, Future Reconciliations: Ethical Engagement with Legacy Collections

This presentation examines the history and creation of legacy collections, with a specific focus on the Hamann-Todd, Terry, and Cobb anatomical collections. These anatomical series, like many around the world, were amassed due to anatomical legislation that targeted marginalized communities. To better understand how to ethically engage with legacy collections, we must understand the past and sociopolitical context in which they were created. We must also better understand who the individuals are that comprise these collections. What narratives do they provide that allow us to bridge the past to the present and truly center descendants? This presentation will discuss how to ethically engage with these collections in an inclusive way that addresses the importance of not only locating but including descendants in conversations involving their disappeared ancestors.

De La Garza, Mary**[207]***Comparing and Contrasting Data from Drone-Based Lidar with Other Remote Sensing Technologies*

The use of aerial remote sensing technology to detect, collect, and investigate archaeological data is an increasingly popular component of archaeological research. Data from drone-based lidar collected below 400 feet allows archaeologists to construct detailed 3D images of the ground surface. During 2023, the University of Iowa Office of the State Archaeologist (OSA) collected drone-based lidar data from three midwestern archaeological sites using a DJI Matrice 300 RTK with base station, equipped with the DJI Zenmuse L1 lidar + RGB survey camera. The data was processed using Pix4D applications. This paper compares and contrasts the drone-based lidar data with existing datasets from each site that were generated from ground-penetrating radar, total stations, and lidar by aircraft. By overlaying the datasets, we examine similarities and differences between landscape and archaeological features. Insights gained through these comparisons will assist archaeologists in detecting new archaeological features at future projects that integrate drone technology.

De La Garza, Mary [267] see Collins, Angela

De La Peña, Paloma (Universidad de Granada), Guilhem Mauran (Université de Bordeaux, CNRS), Tammy Hodgskiss (University of the Witwatersrand), Dineo Masia (University of the Witwatersrand) and Zubair Jinnah (University of the Witwatersrand)

[162]*Of Pigments and Tools: Lithic and Ochre Raw Material Procurement Strategies during MIS 5 at Mwulu's Cave (Limpopo, South Africa)*

The Middle Stone Age was a period of important innovations for *Homo sapiens*, including but not restricted to heat-treatment of silcrete, hafting adhesive, symbolic behaviors such as engravings, or exploitation of ochre. Though southern African Middle Stone Age lithics and ochre are commonly studied, combined studies of their provenance remain scarce. While each of them bears the potential to document the mobility and trade networks of past societies, combining them could increase our understanding of past cultural behaviors and social networks. Here we present results of lithics and ochre provenance studies for the MIS 5 site of Mwulu's Cave in Limpopo, South Africa. Using a naturalistic approach—the analyses of archaeological and geological raw materials by petrography, pXRF, PIXE and ICP-MS—we question the local provenance of the lithics and ochre retrieved at Mwulu's Cave. Our results highlight the existence of nuanced procurement strategies with local provenance for lithic raw material and a combination of local and nonlocal provenance for ochre materials. We question this interaction between exotic and local materials in terms of population mobility as well as their social-symbolic meanings.

De La Torre Salas, Natalie (Florida Public Archaeology Network) and Michelle LeFebvre (Florida Museum of Natural History)

[229]*Climate-Induced Hurricane Risks and Heritage Preservation in Southwest Florida: A Case Study of Hurricane Ian's Impact on Pineland Archaeological Site Complex*

Climate change is intensifying hurricanes, posing increased disaster risks. These risks encompass various factors, from physical to attitudinal, magnifying their impact. Hurricane Ian's impact on Southwest Florida in September 2022 underlines these challenges, particularly for archaeological mounds. Southwest Florida hosts numerous archaeological mounds, which are one of the most important resources for studying past groups in South Florida and past adaptations to a changing climate, placing them at climate-related risk. One notable site is the Pineland Archaeological Site Complex in Bokeelia, FL, which carries importance as a major town of the native Calusa people, characterized by extensive shell mound complexes and water features. To safeguard sites like Pineland from natural hazards, Disaster Risk Management (DRM) plans not only aim to protect heritage but also enhance resilience and reduce disaster risks. This paper briefly discusses Hurricane Ian's impact on Southwest Florida's archaeological sites and the Florida Public Archaeology Network's post-hurricane assessments. We use the Pineland case study to illustrate the development of a DRM draft plan,

underlining the critical significance of preparedness and risk reduction strategies to safeguard our heritage in the context of climate-induced challenges.

De Leon, Jason (UCLA Cotsen Institute of Archaeology) and Nicole Smith (UCLA Cotsen Institute of Archaeology)

[304]

Erasure, Disappearance, and Accountability: Rethinking Taphonomy and Site Formation Processes in the Sonoran Desert

In 1994, the US Border Patrol formalized a boundary enforcement strategy known as “Prevention Through Deterrence” (PTD) that employs the natural environment as a weapon to impede the movement of undocumented border crossers. PTD has subsequently been linked to the death and disappearance of thousands of migrants in Arizona, Texas, and California. Since 2009, the Undocumented Migration Project has employed a combination of archaeological, forensic, and ethnographic approaches to document and understand the violent social milieu created by PTD in regions such as the Sonoran Desert, as well as the material footprint of clandestine migration. In this paper, we highlight the important (and often hidden) role that PTD plays in both the formation of archaeological sites and the taphonomic erasure of human remains. Drawing inspiration from Jeanne Arnold’s work on the California Channel Islands, we discuss how micro-debitage analysis has been used to help explicate the experiences of people crossing the US-Mexico border while also improving our understanding of the complicated politics of site formation processes.

De Leon, Jason [236] see Thakar, Heather

De Lombera-Hermida, Arturo (Universidad de Oviedo)

[162]

Chair

De Lombera-Hermida, Arturo (Universidad de Oviedo), Tania Mosquera Castro (Universidade de Santiago de Compostela) and Xose Rodríguez-Álvarez (Universitat Rovira i Virgili)

[162]

Local Materials, Global Ideas: The Lithic and Symbolic Record from NW Iberia

The NW of the Iberian Peninsula is defined by the scarcity of flint and the predominance of acid soils that prevent the preservation of organic remains. These are the main handicaps affecting Paleolithic research. The lithic assemblages of the Galician Upper Paleolithic sites are defined by the hegemonic use of local and immediate resources, especially quartz. Only at the Valverde site has flint coming from the Cantabrian coast been identified. Based solely on the materiality of the lithic records from the NW Iberia, a process of economic and cultural regionalization could be alluded to, with little relation to the dynamics observed on the Cantabrian coast. However, in the last decade, in the sites where portable or rock art has been found, this interpretation has clearly changed. The scarce examples of portable art show clear parallels with the Cantabrian coast and the western Pyrenees. In contrast, the rock art from Cova Eirós finds its stylistic and technical affinities with open-air stations, and sites from inland Iberia. Consequently, interpretations of the economic and cultural spheres of the UP groups are strongly conditioned by the quality of the archaeological record.

De Lombera-Hermida, Arturo [162] see Mosquera Castro, Tania

De Los Ríos, Gabriela [239] see Matsumoto, Go

De Los Ríos, Gabriela [13] see Ortiz Zevallos, Jessica

De Lucia, Kristin [246] see Miller Wolf, Katie

De Lucia, Kristin [50] see Millhauser, John

de Lucio, Oscar [114] see Ibarra, Thania

De Peña, Felicia [14] see Sosa Aguilar, Danny

de Porras, María Eugenia [67] see Yebra, Lucía

de Raad, Jesper [184] see D'Aprix, Michael

de Roos, Baukje [334] see Czére, Orsolya

De Souza, Patricio (Universidad de Chile), Isabel Cartajena (Universidad de Chile) and Lautaro Núñez (Universidad Católica del Norte, San Pedro de Ataca)

[306]

Exploring 10,000 Years of Variation in Weapon Technologies: A Diachronic Analysis of Lithic Projectile Points in the Puna de Atacama (Northern Chile)

We present an analysis of the functional design of a collection of 353 projectile points from archaeological sites in the Puna de Atacama (21.9°–24.7° S) that belong to the cultural sequence dating from 12,500 to 2400 years BP, which ranges from the earliest groups to inhabit the area to the emergence of the first agropastoralist societies. The results obtained reveal significant changes in projectile or weapon technologies throughout the sequence. This begins with the predominance of the spear-thrower and dart system during the Early Archaic, followed by the diversification and specialization of these technologies during the Middle Archaic, with a significant increase in the use of throwing and thrusting spears. In the Late Archaic, we contend that the bow and arrow became the prevailing technology for the first time, although older technologies remained in use. However, the debate is ongoing, as it is also possible that the artifacts studied are actually smaller dart points that reflect new designs in projectile technology. Lastly, in the Early Formative period, bow and arrow technology became undeniably widespread, while the prevalence of older technologies was low, and often associated with social legitimation practices and rituals.

De Vore, Steven, David Watt (National Park Service) and Adam Wiewel (National Park Service)

[177]

Search for the Federal Retreat Route at the Battle of Oak Hills at Wilson's Creek National Battlefield in Southern Missouri

On August 10, 1861, Federal forces under Brigadier General Nathaniel Lyon and Confederate forces under Brigadier General Ben McCulloch and Major General Sterling Price were engaged in a six-hour fight on the rolling hills surrounding Willson's Creek in Greene and Christian Counties in southern Missouri. Following the death of their leader, with the ammunition and water running low, Federal troops retreated along the Wire Road to Little York Road on their way back to Springfield. Magnetic and metal detector investigations in a 32 ha (80-acre) hayfield southwest of the main battle yielded several bullets, buttons, and horseshoes associated with the skirmish along the retreat route near the Guinn farm site.

De Vore, Steven [177] see Watt, David

Dean, Bradie (Texas A&M University)

[202]

A Reexamination of Hurricane Hill Macrobotanicals

Early Caddo ethnobotany is understudied compared to later periods due to a variety of factors, including preservation and sample size issues. The Hurricane Hill Site (41HP106) is an Early Caddo site with carbonized plant materials previously examined by Gary Crites and Eileen Goldborer. This study analyzed a subsample of Hurricane Hill macrobotanicals stored at the Texas Archeological Research Laboratory at the University of Texas to determine whether their contents were consistent with those examined previously. In general, the results are consistent with past family and genus identifications, as well as the low density of carbonized materials noted previously. These findings emphasize the difficulty in studying macrobotanicals from this period and region and the importance of large sample sizes in Early Caddo macrobotanical analysis.

Dec, Olga (Adam Mickiewicz University)

[80]

Hammer on Vampires: Reconceptualization of So-Called Deviant Funerary Practices of Early Medieval Slavs

Slavic “deviant” funerary practices and dealings with certain dead—including decapitations, mutilations, or crushing cadavers with stones—have been of interest for mortuary archaeologists for many years. The explanation that researchers turned to most often was the one describing these practices as apotropaic in nature, as means of subduing the evil dead (most of the time identified as a “vampire”) and, subsequently, protecting the living community. However, given the broad sociocultural context of early medieval Slavdom, interpreting local atypical burials as “vampirical” calls for much thought. Lack of written sources supporting the narrative of existence of vampire folklore, matched with the linguistic, cultural, and historical spheres of the period most notably form an argument that equating atypical funerary practices with vampirism is at best dubious and hard to defend. With that in mind, objectives of the paper are, firstly, an evaluation of existing interpretations regarding Slavic deviant burials; secondly, contesting these interpretations with sources; and finally, proposing an alternative view on early medieval Slavic deviant burials and their origin and place within sociocultural structures.

Declercq, Stan (Postdoctoral Researcher)

[79]

The Power of Blade Stones in Postclassic Mesoamerica

In the present discussion, I will focus on mutually constitutive relationships between people and the material world, specifically on gestational dynamics, suggesting that by stone flaking and stone chipping, children (of stone) were fabricated. From the womb of the earth, which is very much a stony essence, they are chipped and flaked from the ancestors’ bodies. Some of these “metapersons” were “child blade stones” who personified warriors and fed themselves with sacrificial victims or depicted as tongues in the open mouths of deities, securing sustenance for the hungry gods. I argue that the birth of these stone warriors should be integrated into a major mythological theme, namely the Child Hero and the Old Adoptive Mother. The emphasis will be on Central Mexico but complemented with essential data from other parts of Postclassic Mesoamerica.

Dedrick, Maia (Santa Clara University), Patricia McAnany (University of North Carolina, Chapel Hill) and Adolfo Batún Alpuche (Universidad de Oriente)

[331]

Climate Adaptations in Persistent Places: Relational Solutions in Yucatán, Mexico

This paper focuses on the past 500 years of nearly continual human presence on the lands held today by residents of Tahcabo, Yucatán, Mexico. Previous work addressed why town residents continued to persist in this area despite the violence of colonialism. One answer pointed to significant human relationships with other-than-human beings and things. Drawing on new data—pollen and soil carbon isotope studies from sinkholes in this area—we examine trends in climate, cultivation, and biodiversity, comparing them to the results of previous studies of climate-linked carbonate oxygen isotopes and archival records. Preliminary results from lidar data analysis and groundtruthing contribute to assessment of how people moved across the landscape in response to periods of drought and other pressures from the colonial period (ca. 1540–1821) to the present day. A consistent challenge in explaining past human and other-than-human responses to climate

has been to weigh the influences of environmental context, political regimes, technology, and other factors in landscape and livelihood changes. By considering the more recent past in a well-studied area, potential exists to track cause and effect and deepen understandings of how people persisted amid changing climates and politics through their relationships to plants, other nonhuman entities, and landscapes.

Dedrick, Maia [83] see Vail, Gabrielle

deFrance, Susan (University of Florida)

[131]

Life's a Ditch: The Role of Ditches, Canals, and Waterways for Animal Waste in Historical New Orleans

Since its founding, New Orleans has required infrastructure to collect and move water from its below-sea-level terrain. The urban development of the city required drainage ditches and canals that connected to bayous, the Mississippi River, or Lake Pontchartrain. Although there was trash collection in the city, the inhabitants of New Orleans used these various waterways for trash disposal, and the city also disposed of collected trash directly into the Mississippi up until the end of the eighteenth century. One category of trash that created significant health and aesthetic concerns was the slaughter of animals for market consumption and the disposal of animal carcasses and offal into the city's varied waterways. Trash disposal in waterways made trash invisible and thus created the illusion of order. As shown in this presentation, animal disposal created economic and sanitary concerns that eventually prompted the implementation of animal slaughter policies and new infrastructure that was built downriver and away from the urban core of the city. I use faunal remains from a late eighteenth- and early nineteenth-century urban ditch and the history of the urban slaughterhouse located in the Lower Garden District as examples.

deFrance, Susan (University of Florida)

[249]

Discussant

deFrance, Susan [131] see Kennedy, Ryan

Dega, Michael [263] see Dixon, Boyd

DeGeorgey, Alex (Alta Archaeological Consulting)

[105]

Recent Search and Recovery Efforts: Honoring Missing US Service Personnel through Forensic Archaeology

The Defense POW/MIA Accounting Agency (DPAA) is dedicated to identifying and honoring missing US service personnel, particularly from World War II and other conflicts. Recent search and recovery efforts conducted by Alta Archaeological Consulting (ALTA), through the DPAA Partnerships and Innovations program, focused on excavations of US bombers crash sites in Germany and Poland. Utilizing forensic archaeology methodologies, these efforts aimed to carefully recover and document remains and artifacts. The objective is to bring closure to families by identifying and repatriating the missing service personnel. The collaboration between DPAA and ALTA underscores the significance of honoring fallen heroes and ensuring that their sacrifices are remembered and acknowledged.

DeGeorgey, Alex [192] see Newland, Michael

Degnan, Bridgette (University of California, Santa Barbara), Kaitlin Murphy (Texas Tech University) and Brett Houk (Texas Tech University)

[213]

The North Plaza Marketplace at Chan Chich, Belize

During the Late Classic period (600–850 CE), the ancient Maya had a robust market economy that connected people with goods through long-distance and local exchange networks. Marketplaces were an important institution serving a primary economic function while also stimulating social and political interaction. Recent research has argued for a network of marketplaces at centers across the Maya lowlands, with implications for the commercialization and integration of the Late Classic economy. Some of the challenges for archaeologists are understanding how marketplace activities aligned and varied at different centers, the extent of regional integration, and when these institutions emerged. This paper reviews the results of multiple seasons of investigations of the Late Classic North Plaza marketplace at Chan Chich, Belize, a large ceremonial center in the eastern Three Rivers region. Excavations in the North Plaza, one of two public plazas in the site core, demonstrate spatially discrete craft specialization that includes late-stage biface manufacture, obsidian blade production, and textile working. We further investigate the sources of nonlocal raw material to understand site-wide and regional procurement patterns and possible trade routes. Finally, we consider the development of the Late Classic marketplace alongside other contemporaneous changes in Chan Chich's urban space.

Del Cairo Hurtado, Carlos [158] see Aldana Mendoza, Jesús Alberto

del Olmo Calzada, María Margarita [47] see Contreras-Sieck, Miguel

Delaere, Christophe (Université libre de Bruxelles)

[158]

Chair

Delaere, Christophe (Université libre de Bruxelles), Sergio Durán Chacón (UMSA), Maureen Le Doare (Archaños) and Romuald Housse (Archaños & Université Paris I - Panthéon Sorbonne)

[242]

Human Impact on an Inhospitable Plain: New Insights into the Hydraulic System of the Rio Huaycho (Lake Titicaca, Bolivia)

The ALTI-plano research project (Archaeological Lake Titicaca Inventory-Mapping) aims, in particular, to provide a complete map of archaeological sites along the eastern shores of Lake Titicaca. Our focus lies primarily on refining our grasp of local chronologies, human settlement patterns, and the environmental change effects on agropastoral activities in this less explored area. The study and mapping of archaeological sites in a portion of this region, located between the municipalities of Titali (Peru) and Puerto Acosta (Bolivia), were particularly undertaken. Remote sensing enabled preliminary mapping of a 35 km² hydraulic system in the Huaycho plain (Bolivia), highlighting channels flowing south-southwest to north-northeast toward the river to the east. Some structures indicate direct flow into the lake to the west. Despite the presence of natural features, human activity significantly shaped the landscape. Our results suggest the ancient communities exploited local water tables, qochas, and river meanderings to develop an expansive irrigation system for this semiarid plain. On-site investigation of these channels has highlighted the region's anthropization, provided chronological insights, and revealed usage patterns. This communication presents the results of integrating data collected both by remote sensing and by a six-week pedestrian survey conducted in the region in 2023.

Delaere, Christophe [158] see Capriles, José

DeLance, Lisa (SWCA)

[14]

Bringing the Creed to the Classroom: Assassin's Creed as a Pedagogical Tool

Starting with the release of the titular game in 2007, creators of the *Assassin's Creed* franchise have been showcasing the historical and archaeological record, bringing the past into our living and dorm rooms.

Although criticism of the franchise focuses on the pseudoarchaeological connecting storyline, the franchise does include a highly organized, detail-oriented presentation of the past. Beginning in 2017, game developers, working with archaeologists, have implemented educational modes to guide student learners. This paper will not focus on the larger issues of the franchise that have been discussed elsewhere, but rather on the multitude of ways these video games can be introduced to the classroom to create truly novel learning experiences suitable for multiple learning styles and modalities. The *Assassin's Creed* franchise is unique with its supplemental content, far exceeding any other game design, and has adaptable resources that many game franchises do not. Material from each of these for those teaching an Introduction to Archaeology, World Prehistory, or even Biological Anthropology. Elements of the game, including NPC (non-player characters), can help frame concepts and controversies in ways that allow students to make meaning of the material within a video game context in which they are familiar.

Delgado Espinoza, Florencio

[188]

Chair

Delgado Espinoza, Florencio

[188]

New Evidence of the Northern Manteño Frontier: The Land of the Pasaos before the Spanish Encounter

Early chronicles indicate that the Manteño groups organized themselves along the coast into complex trading chiefdoms: these regional polities, controlled ports, and navigation equipment such as balsa rafts. In addition, maize agriculture combined with seafood products conformed their subsistence economy. Echoing early chronicles, some scholars indicate the existence of two well-differentiated groups, the Manteno at the north and the Guancavilca at the Peninsula de Santa Elena. Others believe there is only one group with minimal regional variations. Most of the studies so far have concentrated at the center of the Manteño or Manteño-Guancavilca cultural region, where it is challenging to observe regional differences. This study aims to contribute to discussing presented evidence obtained at the northern Manteno frontier. More specifically, this work presents data obtained in the region of Cabo Pasao, which, according to the chronicles, was the land of the Pasaos part of the Manteño chiefdoms.

Delgado-Machuca, Natalia [106] see Pelaez-Ballestas, Ingris

Delgado Ramos, Jose Alberto [310] see Aparicio, Patricia

D'Elia, Ashley and Natalia Miles (Chronicle Heritage)

[108]

Inclusion of Indigenous Knowledge and Perspective in Cultural Resource Management: A Laboratory Perspective

Indigenous history has been told through the lens of outsiders claiming authority on the subjects with little credibility given to traditional knowledge of the descendant communities who remain (Bernardini et al. 2021). There is an abundance of Indigenous Knowledge communities can share with archaeologists to help insert Indigenous voices that are currently overlooked. While efforts have been made to change the ways in which archaeology has been conducted historically, there are still many areas in need of improvements; specifically, within the laboratory setting where short-term stewardship, analyses, and curation preparations occur. Using tenants of decolonizing archaeology, the field can transform perspectives, methodologies, guidelines, and practices away from Eurocentric/colonial perspectives, which can at times harm Indigenous communities, instead of strengthening them. Cultural resource management has an opportunity to center Indigenous voices, knowledge, and perspectives in archaeological research and practice and create an integrated community working toward the same goals: preservation and perseverance of cultural identities. This poster will highlight the research we have conducted on repository guidelines and respectful language in analysis,

reporting, and documentation and the ways in which Chronicle Heritage is working toward centering Indigenous communities on the work we are conducting.

DelPrete, Hillary (Monmouth University)

[123]

The Arch Street Project in the Classroom: The Multifaceted Benefits to the Student

It has become clear that current students thrive with a hands-on approach to learning. This type of engagement leads to an increase in achievement and interest among students (Erickson et al. 2020), as well as an increase of knowledge. The human remains that were unearthed as part of the Arch Street Project provided students with an invaluable resource to study and learn about the human skeleton, human variation, and human history; none of which can be examined completely independently of the others. Examining historic remains from a nearby region enriched the students' experience by creating a connection to the skeletal material. The idea that skeletons are the way they are due to their individualized histories helps students to identify the idea of skeletal holism—everything that occurs over an individual's lifetime will help to transform their skeleton. This can also help them to understand human variation. Knowing the rich history of this site also helped students to recognize the ethical issues of studying human remains and the importance of incorporating respect and professionalism when examining them. Having access to the Arch Street material proved invaluable for students.

Delque-Kolic, Emmanuelle [289] see Hendrickson, Mitch

Delsol, Nicolas (Florida Museum of Natural History, University of Florida)

[260]

Chair

Delsol, Nicolas (Florida Museum of Natural History, University of Florida)

[260]

Of Pigs and People in Colonial Guatemala: A Zooarchaeological Historical Approach

Among all the Eurasian domesticates that were introduced consequently to the arrival of the Europeans in the Americas, pigs hold a singular place. Unlike larger ungulates such as horses and cattle, their rearing does not require large resources which makes them easily adaptable to a variety of situations, including urban contexts. In the Spanish colonial sphere of influence, their remains are quite pervasive in archaeological sites located in cities and towns, places that were gathering culturally highly diverse populations including Europeans, Natives, and Africans. Besides providing an abundant meat supply, they were also a source of other byproducts, such as fat, that were vital to reproducing the European material culture in the Americas. Based on the zooarchaeological analysis of 11 sites in Antigua Guatemala and historical studies, this paper aims at highlighting the specific contributions of pigs to the postcolumbian diet as well as exploring the process of their adoption and integration in the native Maya communities of the Guatemala central highlands.

DeLuca, Anthony (University of Texas, San Antonio)

[14]

Game Save Data Is Missing or Cannot Be Read: A Twenty-First-Century Crisis of Digital Archaeological Site Loss

In 2023, the first study of its kind by the Video Game History Foundation determined that 87% of video games made before 2010 are critically endangered. What was once considered a fun but silly form of entertainment has grown into a multibillion-dollar global industry spawning competitive scholastic and professional e-sporting events and spurring popular film and television adaptations. It is undeniable that video games exert an influence on our culture. However, for every *Super Mario Bros.* or *The Last of Us*, there are dozens of games that have not attained that level of notoriety to avoid becoming endangered. In this paper, I argue that video games are no different from ancient games and are worthy of consideration for research by

archaeologists and anthropologists. Video games can encapsulate cultural, political, and economic moments in time, as with the creation of the ESRB after the release of *Mortal Kombat*. Video games can also present different or unfamiliar ontologies, as with the game *Perception*. Echoing the archaeological crisis of the 1970s, this paper outlines how archaeologists can use their knowledge of materials preservation, cultural resource management, and legislative efforts to be proactive in protecting video games from digital oblivion.

Delvaux, Matthew (Princeton University)

[91]

Slave Ships of the Viking Age

Viking ships were slave ships. Between 750 and 1100 CE, clinker-built vessels were used across Northern Europe on raids for collecting captives and transporting them on routes that linked the North Atlantic to Central Asia. We have extensive knowledge about these ships through a unique combination of textual evidence, material remains, and experimental archaeology. Yet this evidence has not been interrogated as a trace of slaving activity. This paper investigates these intersections of slaving and sailing through the material culture of the Viking Age, proposing new models for understanding early medieval slavery and developing frameworks that allow a reappraisal of more recent slave ships as well.

Demarchi, Beatrice [12] see Codlin, Maria

DeMarrais, Elizabeth (University of Cambridge)

[146]

Moderator

[146]

Discussant

Demers, Emily [203] see Ludvigsen, Emma

Demers, Emily [203] see Nash, Jacqueline

Demski, Leo [140] see Mills, Cassandra

DeMuth, R. Carl (Marshall University), Michael Workman (West Virginia State University) and Amy Postalwait (West Virginia State University)

[6]

More Hands Make Light Work: A Collaborative Leadership Approach for Successful Public Archaeology Field Schools

In today's climate of budget cuts and decreasing enrollments, the importance of publicly engaged projects cannot be understated as they demonstrate our value to the public in a tangible way. Archaeological field schools represent obvious opportunities for public engagement and increased visibility for both archaeology programs and their host institutions. However, in many instances a single archaeologist is responsible for managing all aspects of a field school (research design, student supervision, records management, etc.). Juggling these various duties often leaves little time or opportunity to properly engage with the public. This paper summarizes the activities of the West Virginia State University's 2023 field school in Malden, West Virginia, and outlines a system of collaborative leadership used to conduct a successful public archaeology field school. Through defined leadership roles for each team member, we were able to engage the public in a more impactful way. This system of shared leadership serves as a blueprint that should be used in developing a model for more effective public and community outreach for archaeological projects.

Denby, Hayden [100] see Kucur, Ezra

Denemark, Robert (University of Delaware) and Christopher Chase-Dunn (University of California, Riverside)

[17]

Water Access and World-Systems: Aquarian versus Terrestrially Oriented Polities

The primary focus of world-systems analysis (WSA) is the impact of systemic-level interaction on long-term sociopolitical and economic stasis and change. Differentiation (not equalization) among polities is one of its predicted outcomes. WSA is methodologically transdisciplinary. Traditional academic disciplines play a role in the advancement of knowledge but eventually form barriers to understanding as our silos retard the ability to link important phenomena. In this paper we adopt a long-term process model of social change from the comparative world-systems perspective (Inoue and Chase-Dunn 2019). Using archaeological, historical, geographic, political, and social evidence, we identify differences between largely terrestrial and largely aquarian human interaction networks in 12 important linked social processes. The impact of access proves significant, and primarily positive, in 11 of those processes. Advances in maritime archaeology (especially the ability to find both submerged port areas and new wrecks) and metallurgy (the ability to track the origins of metals found on shipwrecks) suggest significant future advances in these regards. Understanding the differences between terrestrial and aquarian systems will allow us to better comprehend social formations and acquire a firmer foundation for the study of polity differentiation and systemic social change.

Deng, Jing [323] see Schwendler, Rebecca

Denis, Megan [304] see Prentiss, Anna

Denis, Megan [308] see Walsh, Matthew

Densel, Allison (University of Michigan), Bayarsaikhan Jamsranjav, Julia Clark, Khurelsukh Sosorbaram and Alicia Ventresca-Miller

[199]

Mongol Trappings: Analysis of Archaeological Leather from Northern Mongolia

In this study, we examined leather excavated from the Mongol period (1206–1368) cemetery of Dood Tsakhir located in Khuvsgul province, Mongolia. This cemetery had been looted in the recent past, yet there was quite good preservation. Leather fragments from clothing, footwear, and tools were recovered and analyzed using ZooMS (zooarchaeology by mass spectrometry). Due to their condition (small, fragile fragments), this technique is preferable to traditional morphological analyses used to identify leather to species. Accurately identifying the species of each sample is crucial for our understanding of the site and the kinds of resources that were available in the region. We identify the diversity of species that were used to make leather, and whether there was a preference for leather from particular animals to make certain types of accessories or clothing. Ultimately, the goal of this project is to determine whether wild or domestic species were preferable and whether other properties of the animal hide were factors in selecting it for leather making.

Deo Shaw, Jennie [136] see LeCompte, Joyce

Derian, Alexandra (Trent University) and Paul Szpak (Trent University)

[249]

Differences in Procurement of Arctic Fox in the Inuvialuit Settlement Region (NWT, Canada) Revealed through Stable Isotope Analysis

Despite their prevalence in zooarchaeological assemblages across Inuit Nunangat (the Inuit homeland), there is a

paucity of information in the ethnographic and zooarchaeological literature about Inuit and Paleo-Inuit relationships with arctic fox (*Vulpes lagopus*). Furthermore, the information that is published has typically focused on the economic value of fox pelts. Stable isotope analysis is well suited for exploring the dynamic interactions between people and arctic fox in the past. We analyzed stable carbon and nitrogen isotopes in the bone and dentine collagen of arctic fox from archaeological sites in the Inuvialuit Settlement Region (NWT, Canada) to explore their foraging ecology and human hunting/trapping. Arctic fox from sites in the Mackenzie River Delta showed greater individual variation in diet than foxes from sites on Banks Island. We interpreted the differences in fox diets between the two regions as indicative of both different fox foraging and human procurement strategies. This study is part of a larger project that seeks to use stable isotope analysis to explore the dynamic relationships between Paleo-/Neo-Inuit and arctic fox in the archaeological past.

Dering, Phil [244] see Anderson, Siobhan

Dering, Phil [156] see Boyd, Carolyn

Dering, Phil [332] see Hanselka, Kevin

Dern, Laresa (Drury University)

[80]

Migration and Dental Nonmetric Variation in Medieval and Early Modern Hungary

Throughout history, the Carpathian Basin has been a natural crossroads for populations migrating between Europe and the rest of Eurasia. During the medieval and early modern periods, three major migrations shaped the demography of the basin: 1) the migration of the Avars; 2) the conquest of the Magyars; and 3) the invasion of the Ottomans. While the cultural impact of these migrations is well understood, their impact on biological variation is not. This study uses biodistance analysis and trait frequency comparisons to explore dental variation in medieval and early modern Hungary. Using ASUDAS, 27 dental nonmetric traits were scored on bioarchaeological collections housed at the Hungarian Natural History Museum and Szeged University (Avar = 139, Carolingian = 226, Post-Magyar Conquest Medieval = 481, Ottoman = 381). The collapse of the Avar empire is associated with the greatest shift in dental variation with subsequent transitions resulting in comparatively subtle fluctuations. After the Avars, Hungarian dental nonmetric variation stayed relatively consistent, even with major demographic and cultural changes. Expanding the available dental nonmetric data from this region promises to further refine these interpretations and expand our understanding of diversity and variability in medieval Eurasia. ***Presentation may include images of human remains.

DeRose, R. Justin [107] see Finley, Judson

Derr, Kelly [133] see Coughlan, Michael

Dersam, Sari [35] see Dersam, Scott

Dersam, Scott (BEAAR Project) and Sari Dersam (BEAAR Project)

[35]

Early Paleoindian Mountain Use: Initial Reports from Ongoing Investigations at High-Elevation Clovis Sites in the Beartooth Mountains, Montana

The use of high-elevation ecosystems by Early Paleoindian cultures using a Clovis-Techno complex has been known for decades. The earliest uses of North American mountain ecosystems have been hypothesized as transient forays by small groups focused on raw material acquisition and limited supplemental hunting. Between 2021 and 2023, the BEAAR Project discovered three Late Pleistocene-Early Holocene occupation areas

associated with the Clovis Culture at ~10,000 feet in elevation. These localities present a new facet of Early Paleoindian adaptations in North America, depicting the first instances of high-elevation habitation sites associated with the Clovis Culture. These sites exhibit evidence of predation, hide working, blade manufacture, point manufacture, and domestic behaviors, in addition to exhibiting shared lithic raw material acquisition behaviors with other regional Clovis localities. These sites represent the highest-known Clovis localities.

Des Lauriers, Matthew (California State University, San Bernardino)

[14]

Learning to Navigate Cultural Resource Management through a Simulated Tabletop Game

While the use of simulations in educational contexts for archaeology is not new, the ways in which this approach have been employed have not fully explored the higher-level educational benefits possible. Many simulations focus on the general concepts of archaeology, rather than viewing them as genuine professional training opportunities. Given that the overwhelming majority of employed archaeologists in the United States work in some facet of cultural resource management, providing a simulated training opportunity for students to manage projects, encounter and resolve crises, wrestle with ethical dilemmas, and address public relations problems can be of great value. Even the best traditional archaeological field schools will not necessarily prepare graduates for the wide range of possible scenarios, and many are thus thrust into decision-making roles without having had the “opportunity to fail” in a low-stakes setting. Additionally, while digital simulations may be more immersive in some sense, the discussions, debates, and healthy competition involved in a face-to-face tabletop setting may prepare students more fully for real-world settings that they will encounter “on the job.” The inclusion of random events, problems that need collective solutions, critical thinking, improvisation, and choices that have permanent consequences create valuable learning opportunities in the classroom.

Deter-Wolf, Aaron [249] see Peres, Tanya

Detisch, Michael [41] see Mink, Philip

Detisch, Michael [229] see Napora, Katharine

DeVault, Dan [153] see Dunham, Sean

Devlin, Sean

[278]

The Great House and the Old Plate: Planter Household Archaeology

Archaeological interpretations of household organization have long recognized its role in the construction of social identities and in the furtherance of social goals. While much of the historical archaeology of Jamaica, and indeed the Caribbean more broadly, has focused on exploring spatial and consumption choices of enslaved Africans and African descendants, application of these kinds of analysis at the household level for planters is less widely applied. Yet, as archaeologies of Whiteness are beginning to demonstrate, White identities are equally constructed within this same milieu and demand to be interrogated and deconstructed. We might expect this to be particularly true during the period historians have termed the “fall of the planter class” in the late eighteenth and early nineteenth century, when both the physical and political security of the planter class was under pressure. Thus, by analyzing the spatial and consumptive patterns of planters, we may be able to mark their deployment of material strategies furtherance of their own social goals. This paper describes evidence recovered from Stewart Castle, a Jamaican sugar plantation great house occupied in the closing decades of the eighteenth century and the opening of the nineteenth century.

Devlin, Sean [16] see McEnroe, Katherine

Devos, Yannick [288] see Vrydaghs, Luc

Dewar, Genevieve (University of Toronto), Elizabeth Niespolo (University of Princeton), Mike Morley (Flinders University), Judith Sealy (University of Cape Town) and Brian Stewart (University of Michigan)

[55]

A Late Pleistocene Paleoenvironmental Record for Northern Namaqualand, South Africa: Geoarchaeology, Geochronology, and Stable Isotopes from Spitzkloof A Rockshelter

Excavations at Spitzkloof A Rockshelter, northern Namaqualand, South Africa, identified a deep stratified sequence with pulsed occupation dating to the Last Glacial Maximum (23–17 kcal BP) and Marine Isotope Stage 3 (>51 ka BP), while the lowest layers are candidates for U-series dating. Importantly, this period encompasses a time of marked climate change, with fluctuating environmental responses within Africa likely requiring human innovations and adaptive plasticity. Abundant ostrich eggshell throughout the deposit (including the undated layers) includes beads and flasks, presumably reflecting social and technological innovations allowing people to forage in the southern margins of the Namib Desert. High-resolution records of climate change in Namaqualand are sparse, yet reconstructing paleoenvironments is fundamental to understanding how people engaged with the landscape. Large grazers in the LGM deposits suggest wetter environments, while arid-adapted specialists imply drier landscapes in MIS 3. To test these interpretations, we present new geoarchaeological, geochronological, and stable isotope results on ostrich eggshell (C, O, and N) to assess the paleoenvironmental context and confirm that the LGM deposits reflect wetter environments than exist today. Ongoing analysis will extend to material from the MIS 3 and older deposits to verify the arid signal.

Dewar, Genevieve [225] see Stewart, Brian

DeWitte, Sharon (University of Colorado, Boulder), Janet Montgomery (Durham University), Julia Beaumont (University of Bradford) and Rebecca Redfern (Museum of London)

[22]

Migrant Health in the Past: Assessment of Differential Growth Conditions between Locals and Nonlocals to Medieval London

Previous bioarchaeological work in medieval London (ca. 1000–1540) has produced evidence of higher survivorship and lower hazards of mortality and, by inference, better health in adults with nonlocal isotopic (lead and strontium) signatures compared to those with local signatures. This may be a medieval example of “migrant selectivity” (i.e., the “healthy migrant effect”), a phenomenon observed in living populations and a limited number of recent historical populations whereby migrants experience better health on average compared to people in both their regions of origin and receiving populations. There are several possible mechanisms underlying the healthy migrant effect, including differences between locals and migrants in childhood growth conditions that produce long-term consequences for adult health (i.e., developmental origins of health and disease, DoHAD). This study assesses the developmental origins mechanism for the healthy migrant effect in medieval London by comparing adult stature (a marker of developmental stress, or lack thereof) between locals and migrants to the city. Preliminary findings suggest that migrants were, on average, taller than London locals and thus experienced superior childhood growth conditions prior to migrating.

DeWitte, Sharon [44] see Jones, Eric

Dew-Meeuwen, Kristin (Georgia Southern University)

[129]

The Stratigraphy of American Archaeology: Gender, Academia, Authorship, and the Need to Go “Beyond the Critique”

This presentation will deconstruct American archaeology’s past to understand modern sociopolitics of gender distributions within the discipline and how these proportions shape archaeological theory, practice, and authority. By connecting the foundations of American archaeology with what they coin the “boys club of

archaeological knowledge and authority,” the author describes these strata and, with them, unearths American archaeology’s problematic tendencies, including the binary bind and the marginalization of feminist epistemologies. Together these layers create heteronormativity and androcentrism, where biases and stereotypes exist. Feminist archaeologists know this and have been critiquing archaeology and its problems these past three decades, resulting in discussions with little change, indicating it is time for American feminist archaeologists to move beyond the critique. By arguing for the inclusion of queer theory, intersectionality, and other feminist epistemologies, the author demonstrates how archaeologists mitigate these problems by using these frameworks, forcing cultural relativism on the researcher, thereby creating a more holistic, inclusive interpretation of the past. The author highlights successful applications of feminist epistemologies in recent years. Together, these case studies demonstrate the benefits of feminist theory and apply it to American archaeology.

Dhody, Anna [123] see Miller, Kyra

Diamond, Joseph [7] see Nystrom, Ken

Diaz, Alexander

[264]

Crafting Bones: An Analysis of a Worked Bone Assemblage from a Mississippian Ceremonial Complex in Northeast Florida

Bone has been used as a medium for crafting both tools and decorative items since our earliest ancestors; however, this important component of material culture has often been overlooked, with the few published studies focusing on assemblages from either a utilitarian or burial context. The Mill Cove Complex, located along the St. Johns River near Jacksonville, Florida, would have served as a locus for ritual activity among the St. Johns II communities in the area. The analysis of the worked bone assemblage recovered from the excavations of a special activity midden (Kinzey’s Knoll) has the potential to provide insights into the role of worked bone within this unique ritual context. This study will create a typology using a multi-analytical approach to highlight the relationships between form and function supported by use-wear and macro fracture analysis to provide insights into the manufacturing, use, and discard of worked bone artifacts recovered from the site. The data gathered from this study will contribute to a better understanding of the role of worked bone within a unique ritual context among the precontact communities along Florida’s Northeast coast.

Diaz, Lucia (Washington University, St. Louis), Sarah Baitzel (Washington University, St. Louis), Arturo Rivera I. (SWCA) and Xinyi Liu (Washington University, St. Louis)

[223]

Investigating Camelid Herding Strategies in the South-Central Andes Using Stable Isotope Analysis

Pastoral practices shape the responses of herders to environmental and sociopolitical changes. This paper uses stable isotope analysis to examine camelid herding strategies from pastoral settlements in the south-central Andes during a period characterized by climatic and political changes (eighth–fifteenth centuries CE). Samples from archaeological sites in Peru and Bolivia—Ayawiri (Puno); Los Batanes (Sama); Omo M10 (Moquegua); and Wila Pucara, ACH-10, Pokotia, Konto Konto, and San Antonio (Bolivia)—provide an altitudinally and temporally diverse perspective on herding strategies. We used oxygen and carbon isotope compositions from sequentially sampled tooth enamel to reconstruct seasonal camelid diet and mobility during animals’ early life stages. We also conducted carbon and nitrogen isotope analysis of camelid bone collagen to reconstruct dietary inputs. These data are interpreted within the specific context of each site environment. We compared the results of published and modern datasets to identify different management practices, such as transhumance across altitudinal gradients. The results will reveal access to pastures composed of plant communities with distinct isotopic signatures reflective of different ecological and

anthropogenically modified environments. These multiple lines of evidence enable insights into the variability of herding practices that are often overlooked using a single line of evidence.

Díaz-Pérez, Clara [245] see Fregel, Rosa

Díaz-Plá, Rodrigo [119] see Power, Ximena

Dibble, Flint (Cardiff University) and Richard Madgwick (Cardiff University)
[334]

Isotopes and Texts: Animal Management Strategies in Ancient Greece

Integrating textual sources, a largely qualitative dataset, with archaeological science, a largely quantitative dataset, is no easy task for archaeologists and historians. This paper reflects on the challenges and opportunities of integrating the textual and biochemical evidence for animal management in the ancient Greek world. Over the last several decades, archaeologists and historians have argued over the topic of animal husbandry in the ancient Greek world. Some scholars have marshaled ethnographic and historical evidence for mobile herds moving seasonally between uplands and lowlands to argue that ancient Greek animals were managed similarly. Other scholars have argued, also on the basis of ethnographic and historical evidence, that animals were reared in smaller herds and largely tied to agricultural land that produced fodder and grazing. Here, we present isotope evidence from ancient Crete relevant to the question at hand: a multi-isotope sequential series that examines seasonal diet and mobility in sheep and goats. Instead of either model, there is a large amount of variability in the ways in which animals were reared. Here, we examine quantitative and qualitative approaches to comparing the isotope evidence with textual sources.

DiEmma, Gabrielle, Jillian Conte (Conte Forensic Consulting LLC), Kimberlee Moran (Rutgers University, Camden) and Karen Scott (University of Alabama, Birmingham)
[123]

Elemental Analysis of Archaeological Hair Compared to Soil Composition: A Case Study of a Child and Adult Female

This case study focused on two individuals, a child (G-009) and an adult female (G-033), recovered with intact hair masses from the former First Baptist Church of Philadelphia (FBCP) cemetery. Hair samples from both individuals were studied visually using light microscopy and chemically using inductively coupled plasma optical emission spectroscopy (ICP-OES) and mass spectrometry (ICP-MS) multi-elemental analyses. ICP-OES analysis focused on the parts per million (ppm) level of 14 elements, including major and trace elements found in hair and soil (Ca, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, P, Zn) and three heavy metal toxins (As, Cd, Pb). Periodic table semiquantitative heatmap analysis via ICP-MS was also conducted. Elemental analysis revealed the G-009 and G-033 hair samples were chemically distinct from each other and from the soil samples collected at the excavation site. The heatmap results suggest that while burial has a significant effect on the mineral content of hair, hair retains elemental distributions unique to the individual even after centuries of direct soil exposure. Therefore, the mineral composition of both the hair and soil in archaeological contexts should be analyzed to provide insight into the types of environmental exposure experienced by individuals ante- and postmortem.

Diesch, Aika Katharina [255] see Wilke, Detlef

Dietler, John (SWCA Environmental Consultants)
[304]

Household Craft Production at San Gabriel Mission, California

Over a decade of research, archaeologists working at San Gabriel Mission (active from 1771 to 1834) explored contexts outside of the mission quadrangle that revealed evidence of the numerous ways in which native

residents navigated their colonial world, including areas of agricultural production, Native American ceremony, and Catholic ritual. Unique among these is an unusually well-preserved Native American house floor feature that contained evidence of domestic consumption and craft production, including fiber processing using ceramic spindle whorls. Set apart from the large-scale adobe housing blocks, communal kitchens, and collective production areas that were primary foci of the Franciscan missionary efforts, this small tule reed hut appears to have been a locus of more autonomous crafting, cooking, and dining. This paper compares the San Gabriel Mission household crafting assemblage to contemporary collections at California missions and native rancherías (villages), assessing the role each productive unit played in local economic systems.

Diez-Castillo, Agustín [308] see Barton, C. Michael

Di Giusto, Marina (University of São Paulo, Brazil), Murilo Bastos (Federal University of Rio de Janeiro, Brazil) and Veronica Wesolowski (University of São Paulo, Brazil)
[178]

People and Food: Investigating the Diet through Isotopic Analysis in a Precolonial Group from Piaçaguera Shell Mound (Sambaqui), Brazil

In this study, we aim to present new evidence on the diet of precolonial individuals excavated in the Piaçaguera *sambaqui* (7151–5668 years cal BP), one of the oldest shell mound found on the Brazilian coast. Previous isotopic analysis has shown that, although there is a general preference for consuming marine fish, there are regional variations in the diet of the groups excavated in *sambaquis* along the Brazilian coast during the Holocene. We conducted isotopic analyses of ^{13}C and $\delta^{15}\text{N}$ on collagen extracted from human (bone and dentine) and fauna (bone) remains from Piaçaguera. The dentin was divided into horizontal mini-slices (both in permanent and deciduous teeth), allowing for the evaluation of diet at various stages of childhood. The results indicate that at Piaçaguera, individuals had a preference for consuming marine fish but also consumed terrestrial animals to a significant extent. Additionally, there is a slight variation in diet when separating the individuals into two groups based on the site's planistratigraphy. During childhood, the study found no significant variations in weaning ages, which typically occur around four years old; the post-weaning diet is similar to that of adults, and some individuals may experience periods of catabolic stress during prepubertal ages.

Dilkes-Hall, India Ella (Griffith University), Stepanus Gung (Dayak Kenyah traditional owner), Andika Arief Drajat Priyatno (Balai Pelestarian Kebudayaan Wilayah XIV, Samarind), Febryanto (Balai Pelestarian Kebudayaan Wilayah XIV, Samarind) and Adhi Agus Oktaviana (Griffith University)
[288]

Payang (Pangium edule) Pengolahan (Processing): Using Experimental Archaeology to Understand the Archaeobotanical Record at Liang Jon, East Kalimantan, Borneo

Liang Jon is a limestone rockshelter situated within the Batu Gergaji range located in Sangkulirang-Mangkalihat karst. In 2019, excavations revealed a rich archaeological sequence with a wide range of macrobotanical remains, including *Pangium edule* Reinw. (payang) endocarps. Payang is an important botanical resource to indigenous groups across Island South East Asia and is extremely toxic due to high concentrations of cyanogenetic glycosides. While historic accounts establish poison leaching techniques, these lack detail around the processing sequence helpful for archaeobotanical inquiry. In collaboration with Dayak Kenyah man Stepanus Gung we developed the Payang Proyek to document step-by-step use of payang; from locating trees, plant collection, through to processing, and consumption, as well as uses for medicine, poison extraction, and other plant-based technologies. Comparison of experimental remains with archaeological fragments recovered from Liang Jon suggest that archaeological remains can be attributed to particular stages in the processing sequence. Our findings demonstrate that payang collection and processing was an important socioeconomic activity carried out at Liang Jon over at least the past 10,000 years with ecological knowledge and techniques maintained and practiced by indigenous communities today.

Dillian, Carolyn (Coastal Carolina University)**[150]***Discussant***Dillian, Carolyn (Coastal Carolina University), Katie Stringer Clary (Coastal Carolina University), Cheryl Cail (Waccamaw Indian People) and Harold Hatcher (Waccamaw Indian People)****[303]***Sharing Traditional Ecological Knowledge (TEK) in an Outdoor Exhibit with the Waccamaw Indian People*

The Waccamaw Indian People (WIP) are a close-knit community that shares knowledge of the relationships, culture, and Traditional Ecological Knowledge (TEK) of their ancestors. Working collaboratively, we have created an outdoor exhibit and interpretive trail that embraces TEK as a means for the public to learn about Indigenous management of the longleaf pine forests and wetlands that make up Waccamaw traditional territory. The exhibit materials highlight the heritage, forests, and ecosystems of the WIP by showing how the lands were maintained in traditional Indigenous ways, and how this environmental heritage persists within the Tribal Grounds and surrounding region. In addition to providing a self-guided exhibit for the public to explore, the project creates green infrastructure using TEK to maintain and restore natural hydrology, wetlands, and longleaf pine forest species, and connects university students with tribal members and the community.

Dine, Harper (Brown University)**[256]***People-Plant Negotiations in Two Rejolladas at Yaxuna and Joya, Yucatán*

Rejolladas have long been identified as sites of specialized agricultural and ritual practice across the northern Maya lowlands. However, archaeological investigations of these cavernous, soil-rich features have been sporadic until relatively recently, and there is still much to be understood about the way people engaged and built relationships with them, especially at the local level. This paper presents an overview of microbotanical and macrobotanical methodologies and preliminary findings from archaeological fieldwork carried out within two *rejolladas* at the ancient Maya sites of Yaxuna and Joya, which are located within the present-day ejido of Yaxunah in central Yucatán. These contrasting case studies build on insights regarding the various ways that Maya people and plants negotiated contours of the landscape they shared.

Discamps, Emmanuel [247] see Barakat, Sarah

Diserens Morgan, Kasey (University of Pennsylvania)**[254]***Heritage Making with a Side of Archaeology: A Community-Led Project and Practice in Tihosuco, Mexico*

The process of heritage preservation and the production of knowledge in indigenous communities regularly seem at odds in terms of their overarching goals and outcomes. Relationships to the study and use of heritage are often fraught and can become political quickly. This paper outlines the practical and methodological aspects of conducting a community-led heritage preservation and development project. It addresses some of the pitfalls and processes that have been used as a part of the Tihosuco Heritage Preservation and Development Project, located in Quintana Roo, Mexico. Additionally, it will focus on the paradox that seems inherent in heritage preservation practice today, that of the focus on materiality versus the focus on the people and the narrative about heritage. I argue for an updated version of community-led heritage making practice that moves beyond the focus on the past to instead center the present and future of heritage assets and heritage narratives for use by local communities.

Dixon, Boyd (Stantec GS) and Michael Dega (Scientific Consulting Services Hawai'i)
[263]

Feasting and Gift Giving in Precontact and Spanish Colonial Saipan, Northern Mariana Islands of Micronesia

Feasting and gift-giving in the ethnography, history, and archaeology of native peoples in Southeast Asia and its islands in the Western Pacific are often given primacy in accounts of academic fieldwork. Some ethnohistoric accounts on the precontact and Spanish colonial Chamorro people indigenous to Guam and the Northern Mariana Islands of Micronesia also mention similar behavior during the early Spanish contact and ensuing 300 years of colonial rule until 1898. Archaeological fieldwork and analyses of the Pre-Latte and Latte periods in the archipelago, however, pay scant attention to recognizing evidence of such events in the material record. This study presents measures for evaluating aspects of feasting and gift-giving at two prehistoric sites on Saipan in the Marianas archipelago between approximately 1500 BC and AD 1668.

Dixon, Boyd [18] see Montón-Subías, Sandra

Dixon, E. James (University of New Mexico) and Craig Lee (Montana State University)
[120]

Origin of Northwest Coast Microblade Tradition: Insights from Shuká Káa Cave (SKKC)

Two hypotheses for the origins of the Northwest Coast Microblade tradition (NWCMT) predominate: (1) it derives from the first human dispersal to the NWC from interior eastern Beringia; (2) it results from westward movement to the coast from interior regions of British Columbia (BC), Canada. The oldest NWCMT radiocarbon date from SKKC is ca. 10,700 cal BP, and the sum probability for all early ¹⁴C dates associated with the NWCMT at SKKC is ca. 10,360 cal BP. SKKC and other early NWCMT assemblages lack tools made from lithic sources and artifact types associated with contemporaneous and older microblade sites in eastern Beringia, while obsidian originating from Mt. Edziza occurs in early NWCMT assemblages. This indicates the NWCMT developed following LGM deglaciation ca. 12,500–10,700 cal BP and results from contact between people on the NWC and the Stikine Plateau, BC, likely between ca. 11,000 and 10,500 years ago. The morphological and functional variability of NWCMT technology suggests experimental application to new tasks and environmental circumstances. These data indicate the NWCMT originates from an early postglacial adaptation incorporating both non-coastal (terrestrial) microblades into a preexisting maritime technological system characterized by stemmed bifaces and a generalized lithic technology emphasizing production of organic artifacts.

Djandomerr, Djaykuk [217] see Florin, S. Anna

Djandomerr, Djaykuk [42] see Huntley, Jillian

Djurdjevich, Goran (Beiwai College, Beijing Foreign Studies University)
[109]

Imperial Tokens: Mirrors in Roman and Qin-Han Empires

The Roman Empire and Qin-Han China were two of the most significant and powerful states and empires in antiquity. Building on recent research findings and drawing inspiration from numerous archaeological discoveries of mirrors in the both empires, this proposed paper aims to demonstrate how contemporary scholars can utilize specific archaeological artifacts, such as mirrors, to enhance understanding of social archaeology and gain insights into the ideas and concepts of the ancient world. The primary objective of this presentation is to conduct a comparative study of mirrors in the Roman Empire and Qin-Han China. The central concept chosen as the foundation of this research is “reflection,” accompanied by sub-concepts: (1) soul/spirit; (2) social identity; (3) empire; and (4) beauty. By employing archaeological remains, findings, and ancient written sources, the study aims to utilize the concept of reflection as a means to connect mirrors within the context of social archaeology. This encompasses the understanding of mirrors as personal items associated with the concepts of soul and spirit, the role of dream and fantasy in mirror usage, and the use of mirrors as artifacts for propagating the ideas and roles of empires as political structures during the Qin-Han and Roman Empires.

Dockter, Abigail (Logan Simpson)**[149]***Oral Histories of Southwestern Paleoethnobotanists: A Karen Adams and Vorsila Bohrer Appreciation*

Paleoethnobotany, the study of past relationships between people and plants, rapidly developed new methods and priorities in examining plant remains from archaeological contexts during the late twentieth and early twenty-first centuries. Oral histories from two paleoethnobotanical researchers, Dr. Karen Adams and her mentor Dr. Vorsila Bohrer (1931–2021), document this development of the field over the course of their influential careers in the US Southwest. In February 2017, Willow Powers and Mollie Toll interviewed Bohrer about her experiences as a paleoethnobotanist, and in 2017 and 2018, Abigail Dockter conducted similar interviews with Adams. These interviews form a small archive of women's histories in this field. The interview material covers topics of methodology, education, and encouragement of young analysts, and the two researchers' perspectives on their field as well as entertaining personal stories that emerged from the pursuit of that work. Such interview projects provide insight into knowledge creation in the field of archaeology as well as an appreciation of the practitioners who have devoted their intellectual lives to this research.

Dodd, Lynn (USC)**[141]***Chair***Dodd, Lynn (USC), Sabina Zonno (Huntington Library, Art Museum, and Botanical Gardens) and Lauren Malkoun (Università degli Studi di Roma “La Sapienza”)****[141]***Making and Made: Time and Virtual Material Action as Empowerment of Cultural Heritage Curation Institutions*

Cultural repositories struggle with competing missions of wide access and preservation. To release this tension, we created the Virtual Reality Global Library (VRGL), a shareable, immersive VR headset experience that provokes presence through real-time virtual reading of ancient manuscripts with parchment simulation. Informed by experts and experimental archaeology, we focus on de-aging strategies that prompt awareness of the use life and biographies of ancient, fragile objects. Conservators and curators both urged us forward and toward caution. Thus, we emphasize transparency in constitutive exclusions of de-aging and renewing parchment. These prompt renewed awareness of the socio-material entanglements of use and ageing, of people touching, kissing, crying, and smearing, or reading the manuscript by candlelight. This use cost by devoted adherents to the Christian faith is accessible to us, bridging divides of time, space, and experience in a virtual realm. We argue that enhanced transparency results for those who use this project when practitioners engage this work personally by yielding insights about material change, materiality, and concepts lively in discourses of New Materialism. We offer concrete examples of multidirectional intra-action and discuss interjections of decision-making, and hence of subjectivities, in gestural and procedural work as 2D images transform into 3D parchment simulations.

Dodd, Walter (California State University, Fresno)**[33]***Street Code: Working Out How Symbolic Artifacts and Features Are Used to Traffic Drugs*

Sixteen years of ethnoarchaeological observation and collection has resulted in the creation of a massive dataset relating to ongoing drug sales in an urban context. Hundreds of thousands of “trash” items have been gathered for study. They display strong repetitive patterning in their content and testify to the organized complexity of everyday dealing. A diverse array of warranted evidence from material culture inventories, slang words and phrases, subcultural behaviors, and rehab interviews is advanced to construct a preliminary model of trafficking dynamics.

Dodge, Robyn (University of Texas, Arlington)**[213]***Ancient Maya Marketplace Investigations at Hun Tun*

This paper discusses preliminary data related to a potential ancient Maya marketplace at the Late Classic site Hun Tun. The Hun Tun Archaeology Project operates under the larger Programme for Belize Archaeological Project and within the modern geographic boundaries of the Rio Bravo Conservation Area. It was determined that Hun Tun Group B fit the established criteria of known marketplaces within the region and was included in this investigation. The coordinated support and collaboration of the larger marketplace study provided the opportunity to gain a regional perspective of Late Classic Maya economy. Marketplace interactions between larger sites, such as La Milpa, and the surrounding hinterland settlements provide insight into the regional mobility of goods. Current marketplace research is the first of its kind at Hun Tun. Marketplace research methodology at Hun Tun was consistent with other sites included in this study and consisted of the following: soil testing of marketplace plazas, trench excavations of plaza courtyards, investigations of associated features, and identification of tree species. Group A served as a control or “non-marketplace” courtyard. Archaeological matrix and tree species were also evaluated in Group A at Hun Tun.

Dodson, Timothy (US Army Corps of Engineers)**[317]***Discussant***[317]***Chair***Dodson, Timothy (US Army Corps of Engineers)****[317]***Smoke and Weirs: The Historic Use and Archaeological Documentation of Fish Weirs in Eastern Tennessee*

The use of fish weirs/traps and dams by both Native American Tribes and Euro-American communities in eastern Tennessee is considered to be common knowledge but has only received modest and sporadic attention by archaeologists/historians. The shapes, sizes, and construction materials vary depending on the environment, biodiversity and size of community that constructed these structures. Whether constructed of wood, stone, or a combination of both, weirs vary in complexity, size, shape, and location. This paper will highlight the ongoing work in documenting fish weirs in eastern Tennessee.

Doelle, William (Archaeology Southwest), Skylar Begay (Archaeology Southwest), Ashleigh Thompson (Archaeology Southwest) and Shannon Cowell (Archaeology Southwest)**[88]***Transforming Archaeological Institutions: The Path toward Tribal Collaboration*

Archaeology Southwest has elevated “Collaboration with Tribes” to the highest priority in our strategic plan. That is easy to do on paper, but we have found that multiple transformations at the organizational and staff levels are needed to implement this goal. It’s a process that Archaeology Southwest has embarked on, but the path toward this goal is neither simple nor straightforward. We provide a historical overview of our trajectory over our 35 years as an institution. Our primary focus is on the past decade, where research, advocacy, landscape-scale preservation, public outreach, and even fundraising are part of this strategic imperative. A key step in our process has been diversifying our staff and board—an effort that is ongoing. Another step is the development of a Tribal Collaboration Model, by a team led by two Indigenous staff members and now accessible on our website. We have begun to implement the model using a simple form that compels staff to carefully consider four Indigenous kinship values (relationship, responsibility, reciprocity, and redistribution) at the outset of a new project to define specific collaborative elements and actions. The goal of this paper is to provide practical approaches to this important process of institutional transformation.

Doering, Briana (University of Wyoming) and Madeline Mackie (Weber State University)
[20]

Considering the Role of Mammoth and Other Megafauna in Food Systems across North America

Archaeologists agree that proboscideans and other megafauna played a role in lifeways of the first Americans. From eastern Beringia to central America, the evidence is unequivocal: humans hunted mammoths. But what role did these animals play in the food systems of the first Americans? New research at several archaeological sites seeks to go beyond the kill site to the campsite. Investigating domestic areas associated with proboscidean remains can help us to better understand how people used this resource as food, their importance to past lifeways, and what changed when they disappeared from the landscape. From Swan Point to La Prele and Colby, this paper considers how researchers are reinvestigating terminal Pleistocene occupations to better understand the relationship between foragers and their environment.

Doering, Briana [67] see Dutro, Cassandra

Doery, Mairead (University of Arizona)
[174]

Sharpening Archaeological Approaches to Linear “Tool Grooves”

“Tool grooves,” “incised lines,” and “axe-sharpening marks” are some of the varying names used to describe linear rock modifications found across western North America. Previous ethnoarchaeological research has examined methods and motivations surrounding the creation of such markings, but consideration of their individual landscape contexts remains limited. Further, the use of technique-oriented terminology to describe linear forms encourages the oversimplification of a large variety of rock art images into a single analytical category. This poster examines the utility of taking a landscape and iconographic approach to the analysis of linear “tool grooves.” Through a case study of over 1,300 incised linear icons located in the Colorado Gunnison River Basin, I examine the diverse forms these images can take, and the trends that emerge from their placement within specific topographic and vegetational surroundings. This poster illustrates the need for more detailed study of linear “tool grooves” that promote better contextualized interpretations of their role in cultural landscapes and Indigenous histories.

Dogandžić, Tamara [247] see Kuhn, Steven

Doherty, Caitlin (Texas A&M University)
[265]

Cove Creek Clovis? Exploring Fluted-Point Assemblages in the Eastern Great Basin

Despite its prominence in Paleoindian archaeology throughout much of North America, Clovis has long been overshadowed in the Great Basin by the potentially contemporary, and locally more prolific, Western Stemmed Tradition. Despite decades of research, the relationship between the two distinct techno-complexes remains unclear. Largely due to difficulties related to dating and the general rarity of buried sites, the nature of Clovis in the region is particularly poorly understood. In 2021 and 2022, a reinvestigation was conducted in Cove Creek, Utah, at a rare concentration of sites (42MD1341, 42MD1404, 42MD2502, 42MD2535, 42MD2604, 42MD2645, and 42MD3117), where original investigators reported surficial Clovis and/or Western Stemmed diagnostic materials and noted the potential for buried deposits. Over two years, approximately 3,000 artifacts were collected from surface surveys at six sites and an additional 100 from test pits excavated at three sites. Here, the preliminary results of the surface surveys, test excavations, and material analyses are reported.

Dombrosky, Jonathan (Crow Canyon Archaeological Center), Susan Ryan (Crow Canyon Archaeological Center), Steve Copeland (Crow Canyon Archaeological Center) and R. David Satterwhite (Crow Canyon Archaeological Center)

[199]

Bickering over Bison Bones: Radiocarbon and Stable Isotope Analysis to Determine Number of Individuals at the Haynie Site (5MT1905)

The Haynie site (5MT1905) is an ancestral Pueblo village that was intermittently occupied from approximately AD 700 to 1280. The formation of this village is extremely complex, as it includes multiple occupations and significant modern disturbance. The Crow Canyon Archaeological Center has conducted research at Haynie since 2017, focusing on reconstructing its occupational history, connections to local and regional networks, its role as a community center through time, and human-environment interactions. Excavations in two pit structures likely dating to the tenth and eleventh centuries yielded bison (*Bison bison*) remains, which are rare for the Colorado Plateau. These remains are found in a few different horizontal and vertical depositional contexts. However, when the skeletal elements are considered together, the Minimum Number of Individuals (MNI) equals one. Are there multiple bison individuals represented in these pit structures or a single individual? We use high-precision AMS radiocarbon dating—providing stable carbon ($\delta^{13}\text{C}$) and nitrogen ($\delta^{15}\text{N}$) isotope values—on multiple bison specimens to answer this question. Our analysis provides insights into the extent of depositional mixing at Haynie, whether people were intentionally placing bison remains in the same location over time, and whether these bison were locally procured or not.

Dombrosky, Jonathan [200] see Nagaoka, Lisa

Dombrosky, Jonathan [249] see Wolverton, Steve

Domeischel, Jenna (US Army Corps of Engineers)

[8]

Chair

Domeischel, Jenna (US Army Corps of Engineers) and Pemina Yellow Bird

[8]

Making the Dream Work: Overcoming Challenges to Respectful Return through Collaboration

A significant challenge to successful repatriation is an inability for federal agencies and museums to identify who has stewardship and compliance responsibility for collections. This occurs for various reasons: universities and CRM agencies may have conducted contract work for federal agencies, maintaining collections at their facilities post-project; records may have been lost, or were not sufficiently documented in the first place; students or researchers may have removed collections and never returned them; or collections may have been moved from their original repository without sufficient transfer paperwork produced. For these reasons and others, institutions may be hampered in their efforts to return ancestors and their belongings in an expeditious and respectful manner. With the changes to the implementing regulation, it is more important than ever to ensure that institutions are able to work cooperatively to find a path forward for repatriation. This paper provides suggestions for museums and federal agencies seeking to establish collaborative relationships and overcome challenges to respectful return.

Domenici, Davide (University of Bologna, Italy)

[252]

The Mesoamerican Knife Handles at the Museo delle Civiltà (Rome): A Cultural Biography

The Museo delle Civiltà (Rome) holds two famous Late Postclassic Mesoamerican knife-handles, sculpted in wood and encrusted with a mosaic of turquoise, malachite, lignite, *Spondylus*, *Strombus*, mother-of-pearl, and gold. Both represent crouching figures—one anthropomorphic and the other zoomorphic—facing toward the now-missing blades. The two artifacts were most probably brought to Bologna in 1533 by the Dominican friar Domingo de Betanzos, together with other mosaics, featherworks, and codices. In Bologna, they ended up in the collection of Ferdinando Cospi (1606–1686) and, subsequently, in other local public collections until

1875, when they were transferred to Rome by Luigi Pigorini. The paper investigates the long cultural biography of the two handles, reconstructing their collection history and focusing on the visual reproductions and textual descriptions produced by a host of scholars over the centuries. Part of the paper will deal with the most recent phase of their biography, that is, a recent multidisciplinary research project—also including scientific analyses and 3D modeling—which explored the handles' iconography, technology, function, and cultural attribution.

Domenici, Davide [302] see Buti, David

Domic, Alejandra [217] see Hastorf, Christine

Domingo Ribas, Guillem [151] see Carrer, Francesco

Dominguez, Alessandra [12] see White, Chantel

Donders, Timme [288] see Feng, Jennifer

Dong, Yu (Shandong University), Yuanyuan Wang (Shandong University) and Fen Wang (Shandong University)
[19]

The Underestimated Utilization of Aquatic Resources in Neolithic Northern China: Evidence from Stable Isotopes

There is no doubt that millet farming and pig husbandry were the dominant subsistence practices in late Neolithic northern China. However, wild resources, such as foraged fruits and nuts, shells, and hunted wild animals, also contributed substantially to people's diet at this time. Wild resources, especially aquatic resources, are sometimes overlooked by archaeologists due to limited preservation. A recent excavation at the Jiaojia site, a late Neolithic regional center in the lower Yellow River Valley, yielded many shells and fish remains, in addition to mammals and other terrestrial animal remains. We carried out carbon, nitrogen, and sulfur isotope analysis on human and fauna remains, including fish remains at Jiaojia, to evaluate the possible contributions of different resources. Sulphur isotope values, in particular, suggest that most individuals have consumed noticeable amount of aquatic resources. This finding provides important insight on how people utilized different kinds of resources at Jiaojia. More importantly, it reminds us that aquatic resources are probably important elements of people's diet, in addition to crops, raised animals, and other terrestrial resources during the Neolithic, even in northern China; more investigations are needed to fully understand the spectrum of subsistence practices.

Dong, Yu [315] see Guo, Siyun

Donner, Natalia (Leiden University) and Lucy Gill (University of British Columbia)
[222]

Following in El Maestro's Footsteps: Historical Ecology and Panamanian Capacity Building in Darién

In 2012, Richard Cooke described the study of so-called Gran Darién as one of the most urgent concerns in Panamanian archaeology. Years later, that mandate resonated with us, and in 2019 we joined efforts beginning to fill in one of the greatest gaps in the archaeology of Latin America. Cooke's mentorship not only delineated our geographical path, but also marked our theoretical, methodological, and ethical approaches to archaeological practice in Panama. The Darién Profundo project aims to carry on Cooke's legacy by applying a historical ecological approach to the Gulf of San Miguel, building on his work in the Las Perlas archipelago, and carrying out research entirely in Spanish, facilitating both local community collaboration and the education of younger generations of Panamanian archaeologists. In this paper, we summarize the results of

the project since its foundation in 2019, including the first chronology of Darién based on radiocarbon dates. We then feature a selection of Darién's archaeological sites, including monumental stone sculpture and architecture. Finally, we share the project's future directions featuring Richard's perspectives, which were discussed in our last conversations with him from the field in 2023.

Donner, Natalia [157] see Gill, Lucy

Donop, Mark, Michael Eichstaedt (TerraXplorations Inc.) and Joanna Klein (TerraXplorations Inc.)

[140]

Cows, Clorox, and Canning: Early Twentieth-Century Consumption and Consumerism in Rural Alabama

The McFall Site (1LU528) in Northwest Alabama provides a case study for the archaeology of rural consumption and consumerism during the first half of the twentieth century. The site and the surrounding land have been maintained as a farmstead by the Holland (1870–1945) and the McFall (1945–present) families, who faced numerous challenges stemming from dramatic global, national, and local events. Material evidence, historical research, and oral histories gathered through a cultural resource management (CRM) mitigation were used to better understand how these families participated in an expanding consumer culture. Available evidence suggests the two families used a variety of strategies, such as flexible agribusiness practices and government programs, to obtain necessities and luxuries as they experienced economic depressions and world wars.

Donovan, Caroline (College of William and Mary) and Jennifer Kahn (College of William and Mary)

[129]

Gendered Publishing Patterns and Occupational Trends, Oceania Archaeology 2005–2020

My research examines ongoing issues of gender disparity in male-dominated academic professions like archaeology. Here, I investigate the link between gender and publishing of archaeological research in Oceania among a broad cross-section of archaeologists. Similar research conducted on North American archaeologists has found significant gender imbalances between female and male publishing rates. To determine if similar trends exist among archaeologists working in Oceania, I created a database to log the number of female first-authored and male first-authored research articles in both regional and international journals, as well as edited volumes. I also recorded the occupational affiliation of the first authors to compare gendered publishing rates and job type. To launch my study of gender disparities, I collected 16 years of data (2005–2020) for nine peer-reviewed regional journals and eight peer-reviewed international journals. My current study investigates the possible causes of gender disparities in publishing, including gender of journal editors, female preference for nonacademic jobs that do not require publications for advancement (as with CRM), instances of gender exclusion and harassment at research field sites, or limited undergraduate mentorship opportunities for prospective female archaeologists.

Donta, Jaime (POWER Engineers) and F. Timothy Barker (POWER Engineers)

[311]

With the Best in the House: Ceramic Analysis of a Nineteenth-Century Irish-American Household

The Anthony Farmstead (SOM.HA.4) in Somerset, Bristol County, Massachusetts, was established in 1757 and passed father-to-son through multiple generations of a prosperous New England Yankee family until the mid-nineteenth century, when the property was rented out to tenants. The longest tenant occupation of the property was by a young Irish immigrant couple and their American-born children. Previous research has broadly examined the site's archaeological assemblage and documentary record to articulate the immigrant family with commonly practiced behaviors within the larger nineteenth-century Irish diaspora culture, and to consider how the family engaged in identity formation simultaneously as Irish and as new Americans. The current research takes a more intensive look specifically at the ceramic assemblage, employing varied

analytical approaches in an attempt to develop a more emic understanding of material choices; identity formation and expression; and local, regional, and global economics.

Dore, Christopher (Heritage Business International; University of Arizona; Simon Fraser University)

[293]

Industry Challenges for Cultural Heritage Consulting Firms in North America

A main challenge confronting archaeologists today is the uncertainty surrounding the availability, viability, and sustainability of careers. As such, this paper provides an economic overview of the cultural heritage consulting (CRM/HRM) industry, the largest employment sector for archaeologists, in the United States and Canada. The industry and its challenges are discussed through a labor economics perspective. The US industry is comprised approximately of 1,400 firms in 2,000 offices, has annual revenue of \$1.1 billion, and employs 9,100 archaeologists augmented by a pool of approximately 3,700 project-hire field technicians. Despite the currently high demand for compliance consulting services, partially fueled by large but temporary federal legislation, the industry has been shrinking with 10-year mean annual growth of -0.5%. Industry firms are having difficulty finding enough employees to meet the demand, yet there are over 10,000 new graduates on the job market every year. The CRM/HRM industry has plenty of jobs but few careers, and graduates are choosing to work in other industries with more stability, benefits, better pay, easier work, and a home base. Thus, both employees and companies are struggling. How can firms be financially sustainable and still provide career paths for junior employees?

Dorison, Antoine [155] see Rostain, Stéphen

Dorland, M. Anne [6] see Weber, June

Doroszenko, Dena [147] see Patton, Katherine

Dorshow, Wetherbee [61] see Moraes, Bruno

Dorshow, Wetherbee [54] see Pinto Lima, Helena

Doubles, Catherine (University of Illinois, Urbana-Champaign), Brandon Ritchison (University of Illinois, Urbana-Champaign) and Maureen Meyers (New South Associates Inc.)

[279]

A Tale of Two Mounds: New Chronologies of Mississippian Movements and Mound Building in Southwestern Virginia, USA

Mississippian expansions through the Cumberland Gap into the region has been explained as the seeking of new opportunities for elite lineages with roots to the west, particularly through the development and control of craft production and related exchange relationships on either side of the Appalachian Mountains. However, new chronologies for two primary Mississippian sites and new excavations at one, the Ely site, suggests that Mississippian movements into and out of this region were punctuated and driven more by historical context and contingent motivations among migrant groups. Here, we report the results of new radiocarbon dating and chronological modeling for Ely. With new high-resolution temporal data we present a new narrative of Mississippian movements in southwestern Virginia and outline necessary future directions for research.

Doucette, Dianna (The Public Archaeology Laboratory [PAL])**[187]***Chair***Doucette, Dianna (The Public Archaeology Laboratory [PAL])****[187]***Life on the Edge: How Can the Archaeological Assessment of the Physical and Cultural Landscape of Today Be Applied to Native American Settlement Choices Thousands of Years Ago?*

Several large-scale cultural resource management surveys conducted ahead of utility line construction in Massachusetts have shed new light on the history of Native American subsistence procurement practices and settlement patterning along two of the most significant river drainages in southern New England: the Charles and Taunton Rivers. Regulated archaeological survey along the traditional waterways and homelands of the Wampanoag and Nipmuck Tribal Nations coupled with their involvement, helped fill in the gaps along the rivers' edges. This paper considers the predictability of Native American settlement choices along the Charles and Taunton Rivers and their many tributaries in eastern Massachusetts during the precontact period and draws from numerous surveys conducted by the Public Archaeology Laboratory Inc. (PAL) and other professionals over the past five decades.

Dougherty, Haley (University of Nevada, Las Vegas)**[103]***Understanding Ecological and Social Diversity in the Virgin Branch Puebloan Region*

The Virgin Branch Puebloan (VBP) region is pronounced by its ecological and social diversity much like other areas of the US Southwest, including Puebloan "core" areas like Mesa Verde and Chaco Canyon regions. This research will examine archaeological materials from Moapa Valley (a lowland area of the VBP region, located in the Virgin Valleys of southern Nevada) and the southern end of the Shivwits Plateau (or the upland regions, located on the westernmost edge of the Colorado Plateaus in northwestern Arizona) during the Pueblo II and III periods. Specifically, ceramics from these regions are analyzed to examine whether the geographical and environmental differences between the lowland and upland regions resulted in differences in (1) food storage methods, (2) food preparation techniques, and (3) social signaling and creation of strong in-group ties.

Douglas, Diane (Initiative for Sustainable Development in Africa), Jeffrey Altschul (Center for Collaborative Synthesis in Archaeology), Gerry Wait (Initiative for Sustainable Development in Africa) and Ibrahima Thiaw (Cheikh Anta Diop University of Dakar, Senegal)**[267]***A Pathway to Attain Sustainable Development in Africa*

The Initiative for Sustainable Development in Africa (ISDAf) was conceived in 2020 to raise awareness of the need to engage local indigenous and descendant (LID) communities as equal partners in Strategic Environmental and Social Assessments (SESA) and Environmental and Social Impact Assessments (ESIAs) for development and conservation projects at the national and local level. The UNDP's (2019) report on international migration explores the driving forces behind many Africans making the dangerous journey to Europe via smugglers. The study found that 90% of immigrants would take the same risks again given the chance to create a life in Europe; 77% said the primary reason they left their homes was because they had no opportunity to participate in their country's government. The failure to adequately engage with LID communities often results in people being displaced and losing access to traditional medicines and foods when they do not have access to doctors, hospitals, or grocery stores. They also lose access to traditional sacred sites, burial grounds, and other cultural sites important to the community, leading to a loss of their self-identity and community cohesion. ISDAf's initiatives in Africa illustrate the potential positive outcomes of working with LID communities as equal partners.

Douglass, John (Statistical Research Inc.; University of Arizona)**[40]***Moderator***Douglass, Kristina (Columbia University)****[1]***Discussant*

Douglass, Kristina [190] see Davis, Dylan

Douglass, Kristina [174] see Mangut, Chiamaka

Douglass, Matthew [126] see Reeves, Jonathan

Doumani Dupuy, Paula [23] see Tashmanbetova, Zhuldyz

Doyle, Emily, Marina Ugarkovic (Institute of Archaeology, Zagreb, Croatia), Goran Durn (Croatian Academy of Sciences and Arts) and Branimir Šegvic (Texas Tech University)**[255]***Interconnectivity between Seclusive Iron Age Communities and Burgeoning Greek Colonies in the Eastern Adriatic Illustrated through Analysis of Ceramic Material Culture*

The Eastern Adriatic region is historically an ingress into the Mediterranean and its wider cultural sphere, serving as a crossroads of cultural exchange and influence. Many seclusive communities have made their homes here since the Neolithic Age, though the Iron Age saw the arrival of numerous Greek settlements as many city-states sought to expand westward. The island of Hvar and the surrounding mainland settlements serve as a microcosm within which the influence of these different communities on one another may be explored. This exploration was undertaken via multiple spectroscopic and chemical methods, with a special focus on an innovative geochemical technique that uses in situ spot analysis over a homogenized approach. These methods include X-ray powder diffractometry (XRD), optical petrography, scanning electron microscopy and energy dispersive spectroscopy (SEM-EDS), and laser ablation–inductively coupled plasma–mass spectrometry (LA-ICP-MS). Preliminary results suggest firstly that native pottery was fired likely at higher temperatures than once assumed, and secondly that the clay paste preparation possibly changed after Greek arrival. These early results indicate that the native communities possessed greater technological acumen than previously ascribed to them and that they likely had greater interaction with the Greek settlers.

Doyle, James (Penn State University)**[90]***Rollout / Not Rollout: Maya Plate Painting and the Kerr Archive*

While Justin Kerr might be best known for pioneering the rollout photographic technique specific to 3D drinking cups and serving vessels, some of his still photographs of painted plates also proved pivotal to the understanding of Classic Maya religion and history. Plates contain artists' visions of creation narratives, courtly scenes, dancing deities, decapitated beings, animal shenanigans, and important textual records. This presentation reviews the corpus of plates in the Kerr archive and analyzes both the graphic strategies of plate painters and the iconographic content on these relatively flat earthenware canvases. Specific case studies of individual masterpieces and potential schools of plate painting reveal the undeniable value of the record that Justin and Barbara Kerr have created, especially with a new generation of the archive at Dumbarton Oaks, in continuing to push forward the fields of Maya archaeology, epigraphy, and art history.

Doyle, Kristina [44] see Whitley, Tamara

Doyle, Sean [294] see Abu Jayyab, Khaled

Dozier, Crystal (Wichita State University)

[166]

Chair

Dozier, Crystal (Wichita State University)

[166]

Disconnects in Archaeology Higher Education: Insights from SAA Faculty, Professionals, and Students

The impending growth of the cultural resource management field (Altschul and Klein 2022) has brought the demand for well-trained archaeology graduates in the United States into sharp focus. In this qualitative study, we explored the relationships and disconnects between archaeology practitioners' stated needs and desires in new graduates to the resources and priorities of instructors in higher education. While practitioners desired practical skills and stronger connections with indigenous and professional communities, faculty members reported low institutional support and difficulty convincing students of the viability of archaeology as a career path. Interviewed students also reported confusion on professional pathways and frustration in graduate school mentorship. This disconnect in archaeological training implies a crisis in both the cultural resource management field and higher education if not addressed.

Dozier, Crystal [202] see Carter, K.

Drake, Stacy (The Field Museum)

[196]

Discussant

Drass, Richard [260] see Bethke, Brandi

Dresser-Kluchman, Elizabeth (UC Berkeley)

[288]

Caught Starch and Managed Hearths: Minimally Invasive and Restorative Methods in Gallina Paleoethnobotany

Concerns around sampling methodology, size, and adequacy endure in archaeobotany, centered on one persistent question—how much is enough? At the same time, archaeologists in many areas have become increasingly interested in minimally invasive and minimally destructive methods in response to ethical, community, and other research design constraints. How might these preoccupations work together? This paper explores what minimally invasive, less invasive, and restorative field archaeobotany might be, and what these “impact-scaled” methods might be able to say. In other words, how much (and what) are the data gathered using these methods is enough? Taking previous work in survey-based macrobotanical collection as a starting point, I present a pilot effort in incorporating paleoethnobotanical analysis into a broader project in the American Southwest. Focusing on the Gallina region of the Ancestral Pueblo world, I present a catch-and-release survey starch extraction project. Articulated with archival research and macrobotanical samples from both disturbed and intact contexts of a looted site, I consider how these variously invasive collection practices, each suited to specific community and landscape contexts, might work together toward greater archaeobotanical understanding of a relatively understudied area within a data-rich region.

Drew, Brooke (Indiana State University/Cardno) and Chris Drew (Indiana State University)
[330]

“Interesting Characters Find Graves in the Potter’s Field”: The Value of Storytelling in Historical Bioarchaeology
 Dr. Patricia Richards had an indelible impact on these married authors’ time as UWM doctoral candidates. Her support as the former’s dissertation advisor was unflinching, and she provided a useful anthropological perspective for the latter’s English creative writing committee. In this paper, her multifaceted contributions and our academic worlds collide as we explore the value of humanistic and data-driven narratives in archaeology. Guided by Dr. Richards’s passion for revealing personal stories forgotten by written history and influenced by scholars known for their storytelling—including Deetz, Praetzelis, and particularly Spector and her seminal publication, “What this Awl Means”—we first introduce what we know from archival and archaeological data about the unusual life, death, and burial of 24-year-old James Jones. The inevitable research gaps are then filled through a fictive narrative meant to enrich our understanding of the complex agents and sociocultural factors that resulted in his pauper’s grave. While guided by data, this narrative is also the product of imagination. As Deetz argued, archaeologists are storytellers; it is our responsibility to communicate beyond the ivory tower not only our often tedious data, but the significance of unknown and unknowable individuals whose lives form the foundations of our work.

Drew, Brooke [43] see Sinders, Elizabeth

Drew, Chris [330] see Drew, Brooke

Drexler, Carl (Arkansas Archeological Survey) and Jami Lockhart (Arkansas Archeological Survey)
[177]

America’s Most Studied Battle: Twenty Years of Systematic Metal Detector Surveys at Pea Ridge National Military Park, Arkansas

Pea Ridge National Military Park commemorates the March of 1862 battle that was the most important engagement fought west of the Mississippi River. Since the early 2000s, archaeologists from the National Park Service, Arkansas Archeological Survey, the Arkansas Archeological Society, and the NPS Volunteers in Parks program have studied the battlefield through numerous means, all heavily employing geophysical approaches. Using remote sensing techniques to identify isolated battle-related finds, plan for shovel testing surveys, and to guide open block excavations, we have studied significant portions of the park and made Pea Ridge one of the most thoroughly-studied conflict landscapes in the country. This research has led to refinements in the way the battle is interpreted to the public and has created unique stories about the event lost beneath the dirt long ago. This poster details those impacts and shows how geophysics-led, collaborative projects can be used to great effect.

Drexler, Carl [177] see Lockhart, Jami

Driscoll, Brooke (Trent University), Paul Szpak (Trent University) and Christyann Darwen (University of California, Davis)
[268]

Working Like a Dog: Stable Carbon and Nitrogen Isotope Analysis of Canids from the Canadian Arctic

To better understand the social and economic relationships between humans and dogs in the Canadian Arctic, stable carbon and nitrogen isotope analyses were performed on canids (dogs and wolves) from a number of archaeological sites. These data provide a record of an individual’s dietary habits and the environments in which they lived. Additionally, the potential of dogs serving as dietary proxies for human subsistence in Arctic contexts (the Canine Surrogacy Approach) was explored. The isotopic compositions of the canid bone and dentine collagen (primarily dog) suggested they had highly variable diets regardless of time

or place, and even throughout their lives. This variation may be indicative of a variety of provisioning strategies and the dynamic, highly contextual nature of human-dog relationships in modern and ancient Arctic societies. At the Silumiut site (Northwestern Hudson's Bay, Nunavut), comparisons of dogs and humans revealed differences in both stable carbon and nitrogen values, implying that dogs are not suitable as direct dietary analogues for humans in this region but do provide an additional, indirect line of evidence for human subsistence practices more broadly.

Druggan, Patrick (Penn State University)

[94]

A Bayesian Approach to the Emergence and Decline of Cahokia

The emergence and decline of Cahokia, the largest Indigenous settlement north of Mexico, have long captivated archaeologists. Population reconstructions are a major line of evidence for unraveling the story of Cahokia. Current models hinge on reconstructions derived from architectural data which estimate population by tracking the quantity of observed dwellings per phase. It has been proposed that the emergence of Cahokia was rapid and marked by significant population increase, perhaps related to the introduction of maize, and the decline of Cahokia appears to have coincided with hydroclimate variation. Our understanding of Cahokia, however, is hindered by a continued reliance on culture-historic units of analysis grounded in informally constructed chronologies. The propagation of error from chronology to population must be addressed for the crafting of robust archaeological narratives. I synthesize the available radiocarbon record of the American Bottom and recently collected architectural data from the East St. Louis Precinct as well as legacy data from Cahokia to provide an updated population reconstruction of Greater Cahokia through a combination of Bayesian chronological modeling and Monte Carlo simulation. I then present these estimates in the context of regional demography, maize introduction, and hydroclimate variation to evaluate existing models of Cahokia.

Drupka, Beata [80] see Wysocka, Joanna

Dudgeon, John (Idaho State University, CAMAS)

[35]

Chair

Dudgeon, John (Idaho State University, CAMAS), Pamela Pascali (Idaho State University) and Rebecca Hazard (Idaho State University)

[35]

Building a Selection-Based Model to Explain the Spatial and Temporal Distribution of Obsidian Artifacts in the Northern Great Basin

Over 20 archaeologically identified obsidian sources occur as inter-bedded surface exposures and stream-transported alluvial deposits within and along the margins of Idaho's Snake River Plain. Previous research has documented the differential frequency of source use through time and variation in material transport distance for southern Idaho obsidians, implying preferential, but as yet unidentified choice criteria were used by toolmakers. The temporal and spatial variability of obsidian use and the observation of discrete, performance-linked material properties meets expectations for a selection-based model framework to explain this distribution. In particular, we find that use-linked performance attributes such as predictability of cleavage/fracture pattern, fractal function, and intra-source coefficient of variation support selection-driven explanations of material choice and use. As prehistoric identification and cataloguing of the source universe increased, obsidians were preferentially chosen for material properties like predictability, and variance reduction in manufacture and use costs, over notional characteristics like material hardness, luster or "workability." Distribution of "high-use" obsidian suggests a selection-based "inertia" existed for these materials, and that the trend of archaeological obsidian utilization supports the observed temporal reduction

of source variability and greater spatial distribution in sources predicted to have high inertia, measured by material properties and performance characteristics.

Dudgeon, John [173] see Hazard, Rebecca
 Dudgeon, John [41] see Pascali, Pamela
 Dudgeon, John [303] see Roos, Christopher
 Dudgeon, John [255] see Schortman, Edward

Dudzik, Beatrix [123] see Morton-Hayward, Alexandra

Duenas-Garcia, Manuel [114] see Campos Martinez, Miriam
 Duenas-Garcia, Manuel [197] see Cobb, Emilie

Dueppen, Stephen (University of Oregon)
[85]

Understanding Livestock in Political Economies in West Africa: Archaeological Insights Inspired by the Legacy of Richard Redding

Among his many intellectual contributions, Richard Redding was a leading scholar in the use of zooarchaeology, specifically the production, distribution, redistribution, and consumption of animal products, to understand political economies. Through systemic approaches, Redding was able to explore the daily lives of different segments of society that are often overlooked in the past. In this paper I explore the role of livestock in the political economies of central West Africa, focusing on the Mouhoun Bend of western Burkina Faso. Here, livestock played a central role in the forging of connections among early farming communities, the later development of inequalities, and the subsequent rejections of inequalities and construction of horizontal forms of complexity. The dynamic political histories of different social segments can be reconstructed through systematic analyses of ritualized depositions of animal remains within archaeological tells that yield insights into animal production, distribution, redistribution, and consumption.

Duffy, Paul [141] see Seifert, Jerrod

Duke, C. Trevor (TerraXplorations Inc.) and Neill Wallis (Florida Museum of Natural History)
[287]

Molding Community: Compositional Insights into the Organization of Mississippian Pottery Production on the Central Gulf Coast of Florida, USA

Technological innovations can have profound social consequences. Alterations to a given potting network change the pacing and tempo of interactions between experts and apprentices, effectively restructuring intergenerational relationships within a community. For this reason, experienced potters may intentionally resist new technologies to keep active the social bonds that depend on a specific organization of production. This study mobilizes technological and compositional analyses to investigate the social implications of shifting from coiled to molded pottery production during the Mississippian transition in Tampa Bay, Florida. The primary empirical observations of this research are 1) the presence of chromium-enriched clays in domestic pottery after AD 1050 signaled increasing reliance on a restricted range of clay resources, and 2) certain optical patterns in thin section identify a form of pottery production predicated on the use of concave molds. We argue that molding was a comparatively expedient technique that broadened participation in domestic potting and eliminated certain steps in the socialization process. Ultimately, patterns gleaned from this work suggest that the expansion of molded pottery paralleled the development of kinship systems predicated on the vertical transmission of property, fundamentally reorganizing relationships between generations of potters and communities in this segment of the Mississippian world.

Duke, Daron (Far Western Anthropological Research Group), Thomas Urban (Cornell University), Anya Kitterman (Hill Air Force Base), Kyle Freund (Far Western Anthropological Research Group) and D. Craig Young (Far Western Anthropological Research Group)
[326]

The Trackway Site: Human Footprints at the Pleistocene-Holocene Transition in the Great Salt Lake Desert
In 2022, human footprints were discovered on the Old River Bed delta, a large terminal Pleistocene to early Holocene distributary wetland in western Utah's Great Salt Lake Desert. The site also sits within the boundaries of the US Air Force's Utah Test and Training Range. The prints' preservation and context showed the unshod feet of adults and children infilled with stream sand from wading in waters that disappeared about 10,000 years ago. Their stratigraphic position suggested an age as early as the terminal Pleistocene alongside similarly preserved Haskett-associated archaeology in the vicinity, ca. 12,500–12,100 cal BP. In 2023, in consultation with affiliated Native American tribes, the site was excavated to determine the age and geomorphic sensitivity of the footprints. Documentation included using ground-penetrating radar (GPR) and 3D scanning technologies to minimize invasive impacts, examine preservation, and create digital products. In this presentation, we share new results on the age and significance of the footprints and discuss next steps in managing the Trackway site through further preservation-based archaeology and ongoing Tribal involvement.

Duke, Daron [41] see Freund, Kyle

Duke, Guy (University of Texas Rio Grande Valley), Aleksa Alaica (University of British Columbia) and Lindsey Paskulin (University of British Columbia)
[30]

Reciprocal Feasting and Access to Foodstuffs at Huaca Colorada
Feasting has long been acknowledged as a central element in Andean social and economic life. Crucial to this emphasis on feasting during the Late Moche period (AD 600–850) is the need for tribute and the redistribution of the goods brought in by tribute through conspicuous consumption. This is not an instantaneous process, but one that requires planning, organization, and time for it to come to fruition in the great feasts for which the Moche were known. These social processes did not simply happen but were the product of the organized accumulation of food, drink, and various implements with which to serve and consume them. These goods were both local and foreign in origin and were accumulated as part of the reciprocal tribute system postulated for this region at this point in time. This system required administrators, dedicated space for collection and redistribution, and both the time and labor to convert these goods into consumable materials. Utilizing architectural, ceramic, paleobotanical, and zooarchaeological evidence, we identify the functional spaces at Huaca Colorada where the activities of collection, redistribution, food production, and consumption took place and discuss the social processes entailed in maintaining this system.

Duke, Guy [197] see Ramirez, Benjamin

Duke, Guy [161] see Rowe, Sarah

Dukes, Joel [177] see Griswold, William

Dukes, Joel [177] see Wilkes, Margaret (Meg)

Dumas, Ashley (University of West Alabama)
[153]

“... this distant and isolated post”: Fort Tombeché and Frontier Community

The French established Fort Tombeché in present-day Alabama in 1736 to secure their alliance with the Choctaws and to more firmly establish their presence in a region vulnerable to English takeover. During the following 27 years, hundreds of Choctaws visited the fort to trade and confer, and they eventually established a town nearby. Historic documents and archaeology suggest that Fort Tombeché and its surrounding landscape were a nexus for multiple ethnic groups and nations, a place for negotiating colonial and Native

identities. While traditionally studied as reactionary pawns of political decisions and events occurring hundreds and thousands of miles distant, Tombecebé's inhabitants and neighbors conducted daily lives as responses to the demands of basic survival and local alliances.

Dumitru, Ioana and Wolfgang Alders (Center for Advanced Spatial Technologies [CAST]) [55]

Dynamic Coasts and Landscapes of Resilience: Archaeological and Environmental Hotspot Modeling on the Swahili Coast (Sixth–Nineteenth Century CE)

With over 40% of the global population residing within 100 km of a coastline, coastal regions stand at the forefront of the climate breakdown. This paper adopts a diachronic approach to investigate how Swahili coastal communities, who inhabited the northern Tanzanian coasts from the late sixth to the nineteenth centuries CE, adapted to a spectrum of climatic and environmental stressors. Situated in tropical East Africa, this region has weathered a complex history of severe droughts, floods, storm surges, and other extreme natural phenomena. Our research leverages environmental data and incorporates known archaeological site locations as training data to develop an Archaeological Predictive Model (APM). This APM will simulate areas of high archaeological potential and validate the significance of environmental hotspots in shaping the coastal settlement network. This model will center on the coastal hinterland of Pangani Bay (5° 25' 60" S, 39° 0' 0" E), a region with tremendous potential to illuminate the interconnected factors at the climate-environment-society nexus that shaped settlement patterns and impacted subsistence strategies, food security, infrastructural adaptations, and governance frameworks across time.

Dunbar, James [232] see Wallis, Neill

Duncan, Gary [334] see Czére, Orsolya

Duncan, Neil [122] see Batres, Kimberly

Duncan, Neil [67] see Whelton, Kathryn

Duncan, Savannah and Sarah Rowe (University of Texas Rio Grande Valley) [285]

"La Cisterna": An Analysis of Ceramic Materials from a Manteño Phase Hilltop Water Cistern in Dos Mangas, Ecuador

A Manteño phase (AD 750–1530) settlement located in the present-day community of Dos Mangas, on the coast of Ecuador, is the site of a rare hilltop water cistern, which was previously excavated by Sarah Rowe in 2009. Archaeologist Jorge Marcos first described the presence of hilltop water cisterns utilized during the Manteño phase, which collected mist from coastal fog that was then distributed to agricultural terraces via irrigation canals. Due to the rare occurrence of these water features in the archaeological record, little is known about additional associated activities. The 2009 excavation of this Manteño phase hilltop cistern was the first of such a feature. It yielded no evidence of irrigation canals; however, leveled terraces can be observed on the hillside leading to the cistern site, suggesting previous agricultural terracing at the site. A recent analysis of materials from the 2009 excavation suggests potential ritual use of the site, attributable to the presence of a large quantity of burnt and fineware ceramics, indicative of feasting and ritually significant practices, in addition to utilitarian vessels likely used for crop storage. Other significant materials include mother of pearl shells, and canine remains, which also suggest ritual use of the site.

Duncan, William (East Tennessee State University) and Chris Stojanowski (School of Human Evolution and Social Change)

[300]

Historical Bodies and the Marketplace: Ethical Engagement

Commerce and trade in human remains involves a panoply of thorny ethical questions surrounding rights of the dead and the authority of the living to speak for them. Trafficking of human remains may be defined as unauthorized, exploitative, or obscene commerce involving human bodies. Interest in a particular set of human remains is frequently heightened by a connection to larger narratives in public imagination. Criminality, royalty, relics, and superlative qualities frequently drive public interest. “Forensic” biohistory refers to the use of scientific methods to ascertain the identity or characterize the circumstances surrounding the lives and deaths in such cases. Here we examine the broad landscape of biohistory to identify and explore ethical challenges that anthropologists face to advocate for the dead while simultaneously avoiding and combating exploitation and trafficking of human remains. Specifically, we consider justification of exhumation, who (if anyone) owns remains legally or morally, and arbitration of competing narratives surrounding historical bodies in examples such as Francisco Franco, Richard III, Beethoven, Pedro de Corpa, and Charles Byrne. Anthropologists’ roles in studying such historical bodies is potentially fraught but presents opportunities to shape public debate about history and experience greater impact outside of the academy.

Dungan, Katherine (Arizona State Museum)

[305]

Chair

Dungan, Katherine (Arizona State Museum)

[305]

The Meaning, Value, and Purpose of Things: The Evolving Idea of the Archaeological Museum Collection

In addition to being tangible heritage and a material cultural record of the archaeological past, archaeological museum collections are products of archaeological and curation practice during and after the time of their collection. Likewise, the laws, rules, and procedures that shape archaeological collection in the field and the accessioning of materials into museums and repositories are products of ideals of (or at least ideas about) archaeological practice at particular points in time. Past conceptions of the meaning, purpose, and value of archaeological collections therefore continue to shape our interactions with museum collections in the present. Unpacking these historical and evolving ideas is a valuable step in becoming better stewards of the material in our care. Collections at the Arizona State Museum—an institution with over a century of collections history as well as an active repository and a long-standing regulatory role in Arizona archaeology—serve as a case study.

Dunham, Sean (Chippewa National Forest), Amy Burnette (Leech Lake Band of Ojibwe), Dan DeVault (Leech Lake Tribal College), Marcie Gotchie (USDA Forest Service) and Kurt Kipfmueller (University of Minnesota)

[153]

Fire History and Red Pine: Ojibwe Cultural Burning in Northern Minnesota

This presentation highlights the work of our fire history partnership on the Chippewa National Forest and Leech Lake Band of Ojibwe Reservation in northern Minnesota. The research is a collaborative effort involving the Leech Lake Band of Ojibwe, Leech Lake Tribal College, the USDA Forest Service, and the University of Minnesota that is exploring the role of human behavior in shaping the iconic red pine forests of northern Minnesota. Part of this effort includes compiling fire histories and we have established tree-ring chronologies that extend into the 1670s in various parts of the forest. The data suggests that the fire history pattern observed in parts of the forest were formed and maintained over time by the Ojibwe prior to the establishment of the national forest. This presentation will provide an overview of our current understanding of the fire history in our shared landscape as well as how our partnership is creating opportunities for interdisciplinary cooperation between various disciplines and stakeholders regarding cultural burning and Indigenous land stewardship.

Dunning, Nicholas (University of Cincinnati), Armando Anaya Hernández (Universidad Autónoma de Campeche), Jeffrey Brewer (University of Cincinnati), Christopher Carr (University of Cincinnati) and Nicolaus Seefeld (University of Bonn)

[31]

Behemoths of the Bajo el Laberinto: The Development of Urban Reservoirs at Yaxnocah and Calakmul, Campeche, Mexico

The Elevated Interior Region of the Maya Lowlands, including the area surrounding the sprawling Bajo el Laberinto, faced acute water availability issues that necessitated the annual capture and storage of rain water to support urbanization. Two large urban areas dominate ancient Maya settlement around Bajo Laberinto: Yaxnocah, an extensive Preclassic center on the bajo's southern flank, and Calakmul, the eventual Late Classic seat of the powerful Kaanul dynasty, on its northern rim. Unsurprisingly, urban development at these two centers was accompanied by the development of an elaborate system of reservoirs constructed on a wide range of scales. In this presentation we summarize evidence for the development of their water capture and storage systems beginning in the Middle Preclassic and continuing well into the Postclassic. Among other findings is evidence for some of the earliest and some of the largest urban reservoirs known in the Maya Lowlands. However, in addition to massive civic projects, water management also took place at the household level.

Dunning, Nicholas (University of Cincinnati)

[261]

Discussant

Dunning, Nicholas [31] see Anaya Hernández, Armando

Dunning, Nicholas [31] see Brewer, Jeffrey

Dunning, Nicholas [31] see Carr, Christopher

Dunning, Nicholas [31] see Lentz, David

Dunning, Nicholas [31] see Meyers, Stephanie

Dunning, Nicholas [31] see Montgomery, Shane

Dunning, Nicholas [78] see Reese-Taylor, Kathryn

Dupey, Elodie (Instituto de Investigaciones Históricas, UNAM)

[302]

The "On Colors" Chapter in the Historia General de Sahagún: Its Structure, Contents, and Contribution to the Knowledge of Technology and Artistic Practices in Ancient Nahua Society

This paper revisits the structure and contents of the greatest source—the only one of its kind—concerning the knowledge of color technology and, consequently, artistic practices of the ancient Nahua: the chapter on colors in Sahagún's *Historia General de las Cosas de Nueva España*, which contains a description in Nahuatl of the origins and uses of coloring materials used since prehispanic times, accompanied by illustrations and Spanish descriptions. Although the version of this chapter included in the Florentine Codex has caused much ink to flow, this research aims to address other important aspects, not yet studied, to refine our reconstruction of the prehispanic and colonial knowledge about materials for rendering colors, their categorization, and cultural appreciation. Based on a comparative study of two variants of the text and an analysis of the illustrations in the Florentine Codex, this study aims, on the one hand, to clarify the content of the largest amount of data available on Nahua coloring materials, and on the other hand, to better define when, where, by whom, and in what context this information could have been provided, so that we can make a more thorough and conscientious use of it.

Durán Chacón, Sergio [242] see Delaere, Christophe

Durand Cáceres, Karen [199] see Eslinger, Emmalee

Durn, Goran [255] see Doyle, Emily

Dussubieux, Laure (Field Museum of Natural History), Jean Milot (Field Museum), Virginie Renson (University of Missouri Research Reactor) and Spencer Seman (Field Museum)
[50]

Isotope and Elemental Analyses Using Portable Laser Ablation at the Elemental Analysis Facility: A Progress Report

The study of archaeological artifacts often needs to be undertaken with no or very limited damage to the objects. It is with this constraint in mind that the Elemental Analysis Facility at the Field Museum was established. The choice of laser ablation–inductively coupled plasma–mass spectrometry (LA-ICP-MS) was ideal in this respect as the damage to the artifacts is invisible to the naked eye; however, objects must fit into the laser chamber (10 × 10 × 1.8 cm with our current laser). This is a major limitation for larger objects, inducing sample selection bias. With portable laser, a relatively novel sampling technique, micro sampling is possible virtually anywhere and on any type of objects without limitation of size. Aerosols produced via ablation are pumped in air and deposited onto a Teflon filter. The ablated material can then be directly analyzed for elemental composition via LA-ICP-MS but can also be subjected, after dissolution, to isotope analysis. We are exploring the capabilities of this approach for the elemental analysis of ceramic and copper artifacts and the isotope analysis of lead in copper, silver, and ceramic; of iron in iron-based objects; and of strontium in glass and bones.

Dussubieux, Laure (Field Museum of Natural History)
[86]

Discussant

[86]

Chair

Dussubieux, Laure [50] see Blair, Elliot
 Dussubieux, Laure [50] see Davis, Kaitlyn
 Dussubieux, Laure [60] see Fenner, Jack
 Dussubieux, Laure [50] see Guevara-Duque, Maria Isabel
 Dussubieux, Laure [86] see Kenoyer, Jonathan
 Dussubieux, Laure [86] see Knisley, Matthew
 Dussubieux, Laure [50] see Lindsay, Ian
 Dussubieux, Laure [86] see Nash, Donna
 Dussubieux, Laure [50] see Rivera I., Arturo
 Dussubieux, Laure [50] see Sterrett-Krause, Allison
 Dussubieux, Laure [86] see Wang, Kuan-Wen
 Dussubieux, Laure [86] see Williams, Patrick Ryan

Dutkiewicz, Ewa [58] see Singh, Natasha

Dutro, Kassandra (University of Wyoming), Briana Doering (University of Wyoming) and Casey Black (University of Wyoming)
[67]

Interconnections between Indigenous Women and Traditional Fire Practices in the Far North

Women within hunter-gatherer societies have had deep interactions with fire through their cultural and gender roles for thousands of years. I aim to explore the intersections among Indigenous women of Dene speakers, fire, and material culture throughout the recent and more distant past. My focus is centered around women's/girls' interactions with their environment and specifically fire from both natural and human-made sources. In order to achieve a more holistic perspective, I will apply a four-field anthropological approach that compares data from Indigenous oral histories, Indigenous language

dictionaries, material culture from multiple Interior Alaskan archaeological sites, and publications ranging from multiple disciplines.

Duwe, Samuel (University of Oklahoma), Kurt Anschuetz (Rio del Oso Anthropological Services LLC) and Kenny Wintch (Bears Ears Partnership)

[112]

The Migration Panel: Rethinking Acoma's History in SE Utah

Near the summit of Comb Ridge, an imposing monocline that rises above the dry landscape of southeastern Utah, is a great series of petroglyphs that archaeologists call the Procession Panel. The panel depicts four lines of anthropomorphic figures converging on a central double circle. Dating to Basketmaker III/Pueblo I transition (ca. AD 650–800), the panel was created at a time when dispersed households were coming together to create a new kind of Pueblo village social life. Archaeologists propose that these petroglyphs commemorate coalescence event(s). We agree that this rock imagery records epic histories. Nonetheless, our paper complicates the archaeological narrative by incorporating the beliefs and experiences of Acoma Pueblo colleagues. Over the past three years, our team, consisting of Acoma tribal members, preservation advocates, and archaeologists, has built a partnership based on collaborative site visits and discussions. Our Acoma colleagues believe that the movement of people depicted in the panel is one of migration and records their Pueblo's story of emergence in Utah and subsequent movement south to their present home in New Mexico. We seek to show how centering Indigenous beliefs and viewpoints can expand archaeological interpretation while simultaneously reestablishing and strengthening claims of tribal sovereignty.

Dye, David (University of Memphis)

[25]

Discussant

Dye, David (University of Memphis)

[333]

The Dark Arts: Mississippian Dramatic Delusions and Theatrical Illusions

Demonstrating one's spiritual power through dramatic theatrics, based on deceptions and illusions, has long been the purview of ritual practitioners in their efforts to gain, legitimize, and maintain political and social advantages. Exclusive and secretive ritual sodalities, which often form the institutional framework for corporate-based magical practice, is evident throughout Indigenous North America—sharing many similarities, especially miraculous performances that defy the laws of nature. Magical practice as a way for ruling elites to garner authority and wealth has been overlooked by scholars investigating the Mississippian world. In this paper I focus attention on Mississippian Hero Twins imagery, mound portals, and symbolic weaponry to argue ritual theatrics bolstered aristocratic privilege through awe and fear. Magical practice, including conjuration, legerdemain, and prognostication, has deep roots into the ancient past as revealed in the archaeological record, ethnohistoric accounts, and iconographic images.

Dyer, Joanne [302] see Buti, David

Dylla, Emily (Texas Historical Commission) and Zachary Overfield (HDR Inc.)

[192]

When Survey Is Not an Option: Comprehensive Archaeological Monitoring Standards in Texas

Archaeological monitoring is generally considered a secondary investigative methodology, to be used when necessary after proactive archaeological work has already occurred. However, monitoring is increasingly relied on as a primary form of investigation within archaeological compliance, particularly in highly urban settings where proactive work is logistically challenging and cost prohibitive. Consequently, monitoring has become a kind of wild west in archaeological compliance, lacking standardization between consulting firms,

governmental bodies, and regulatory agencies. In 2022, the Council of Texas Archeologists Standards and Guidelines Committee formed an ad-hoc subcommittee to address this issue, on which both authors serve. In the paper, we discuss some of the unique challenges posed by archaeological monitoring and the solutions we are proposing in Texas to help mitigate or minimize these challenges.

Dzurka, Caylee (Memorial University of Newfoundland and Labrador)

[136]

Sowing the Seeds for a Relational Archaeology: Building Relationships in Queer Inuit Communities as a Settler Archaeologist

Relationships form the foundation of every community archaeology project. By establishing relationships with communities whose cultural heritage is intertwined with the archaeological record, archaeologists not only ensure that their work is meaningful to all connected parties but also adhere to the ethical principles of accountability and public outreach outlined by the Society for American Archaeology. With the rise of heart-based practices, there has been an increased effort to analyze the effects that these relationships have on our research methods and our interpretations of the past. Yet, relationships between communities and researchers are often reflected on after a project has finished rather than analyzed throughout the research process. In my work with the Queer Inuit Pasts and Futures Archaeology Project in Nunatsiavut (Canadian Arctic), I have found that the relationships I have built with my community partners are not just an essential precursor to our research but are an ongoing component of our attempts to build connections between contemporary queer Inuit and the material culture created by their ancestors. Therefore, I will argue that, in a relational archaeology, there is no “relationship building” phase but a continued analysis of the connections that are formed between participants, researchers, ancestors, and descendants.

Earle, David

[237]

Chemehuevi Sites in the Western Mojave Desert in the Late Nineteenth Century: Continuation of Desert Adaptations by Chemehuevi Migrants in the Ranching Era

This presentation will discuss several sites in the southern Antelope Valley (western Mojave Desert) that were occupied in the late nineteenth century by Chemehuevi family groups. At one of these sites, a traditional circular structure—dwelling—dating from that era was photographed in the 1920s and salvaged in 1966. Recent research on the site and its environs has expanded our understanding of this occupation. These Chemehuevi family groups, following a traditional economic adaptation rather than attaching themselves to local ranching communities, were part of a many-decades-long movement of Chemehuevi/Southern Paiute from the Nevada-California border region southwestward across the Mojave and Colorado Deserts. The traditional ability of the Chemehuevi and Southern Paiute groups to successfully cope with extremely xeric conditions on the southern margin of the Great Basin made this remarkable historic-era migration possible. This remarkable adaptation to extreme desert conditions, among the most xeric in western North America, and the persistence of this adaptation near the end of the nineteenth century among migrant groups in the western Mojave Desert and the Antelope Valley is discussed.

Earle, Julia (University of Texas, Austin)

[185]

Tombs as Evidence for Religious Diversity in the Late Prehispanic Sacred Valley, Peru (ca. 1000–1532 CE)

This paper articulates a novel approach to prehispanic Andean funerary architecture that interprets differences in materiality and temporality as evidence for distinct religious traditions. I analyze a sample of 845 tombs throughout the Sacred Valley, Peru, and adjacent tributary valleys, built and used during the Late Intermediate and Inka periods (ca. 1000–1532 CE). This sample, combining primary and published datasets, includes a wide variety of tomb structures that would have variably facilitated or impeded particular interactions and relationships between the living, the dead, and nonhuman agents. To understand this diversity, I develop a typology comprising seven tomb types, which display overlapping distribution at local and regional scales. In

contrast to studies that assumed general homogeneity and commonality in Indigenous Andean mortuary practices, this dataset attests to considerable diversity in belief and value systems over a 500-year period. As such, this study presents new interpretations of late prehispanic interment styles and funerary structures, considering that Indigenous Andeans across time and space have held divergent beliefs about life and death.

Earle, Timothy (Northwestern University)

[146]

Discussant

Earley, Caitlin (University of Washington)

[90]

Vessels at War: The Kerr Archive and the Study of Classic Maya Violence

Rollout images of Maya vases and the database developed by Justin and Barbara Kerr allowed unfettered access to Classic Maya depictions of tribute, palace life, and mythic history. The Kerr Archive also brought into focus marching warriors and captured enemies, some of them sacrificed in polychronic detail. In this paper I examine how the Kerr Archive has enabled a better understanding of violent imagery through the lens of painted vases. I consider the iconography, style, and embodied experience of scenes of warfare, including its preparation and aftermath. I argue that painted scenes of warfare prioritize relational networks, complementing archaeological and sculptural approaches to the study of Maya war. Where possible, I consider the context of vessels depicting violent scenes, exploring how painted ceramics intersected with other forms of painting and sculpture to convey political, economic, and cultural narratives.

Earley, Caitlin [230] see Kelly, Mary Kate

Earley-Spadoni, Tiffany (University of Central Florida)

[26]

Surveillance and Intelligence Gathering in the Urartian and Assyrian Empires

By the Middle Bronze Age (ca. 2000–1600 BCE), two distinct fortified landscape styles had developed in western Asia: fortifications surrounding grand urban complexes and the “fortified regional network” (FRN), a rural, regional system comprising fortresses, forts, towers, and other structures situated along roads and river crossings. FRNs performed diverse roles including military communication via fire beacons, rest stops, route protection, and garrison housing. In the early first millennium BCE, surveillance and intelligence gathering were critical components of Urartian and Assyrian imperialism. The research investigates the Urartian Empire’s surveillance infrastructure, employing geographic information system (GIS) analysis to map and interpret archaeological features like watchtowers and fortifications. Mobilizing comparative material from Assyrian textual records and archaeological evidence, the paper sheds light on administrative structures, espionage practices, and the roles of surveillance and intelligence in maintaining order and empire building. Ultimately, the Neo-Assyrian Empire expanded on the FRN model, using fortified villages and towns—rather than forts—as hubs in their networks. Meanwhile, the Urartian Empire, located in mountainous terrain, employed FRNs for route control, information transmission, and traveler monitoring.

Easley, Gavin (University of Missouri) and Christine VanPool (University of Missouri)

[333]

Necromagikon: Comparing Egyptian and Casas Grandes Archaeology

Death exists at the cornerstone of every culture. Each culture has death rituals through which humans seek to control the unknown. These rituals may focus on the event of dying and “crossing over” as dictated by each culture, but also include the role the dead might play even after their bodily death. Archaeologists have focused on mortuary ritual, but the magical practices surrounding death and the dead are less heavily studied. We have coined the term necromagikon, meaning death magic, to refer to magic practices involving death,

and the dead. This term brings into focus the ways the living can interact with the dead with sacra that include associated myths, magic, and artifacts to complete specific rituals. Our categories include the intent of the practitioner (e.g., controlling demons with magic wands, reanimating human remains to help the recently deceased) and subcategories that include the desired effects of these rituals (e.g., allowing the dead to pass on). We present two case studies from Middle Kingdom Egypt (2055–1650 BC) and the Medio period (AD 1200–1450) Casas Grandes of the Greater Southwest to illustrate the utility of our model.

Easley, Gavin [333] see VanPool, Christine

Easton, Norman (Yukon University)

[49]

Radiocarbon Dates and a Proposed Cultural Chronology for Little John (KdVo-6), a Multicomponent Site in Eastern Beringia, Yukon Territory, Canada

The Little John site (Borden #KdVo-6) holds a sequential record of human occupation from the Allerød through to the present day, including early and later expressions of the Chindadn complex, the Denali complex, the Northern Archaic tradition, the Late Prehistoric/Dene, the Contact Transitional of the nineteenth and early twentieth centuries, and the more recent post-Alaska Highway historic periods. The earliest Occupation period (East Lobe LJ OP I-a, ca. 14.5–13.8 Kya) is chronologically equivalent to Holme's Swan Point Diuktai but technologically ambiguous, dominated by expedient retouched split pebbles, flakes, and flake cores, undiagnostic biface fragments, split cobble choppers, hammerstones, and debitage. East Lobe LJ OP I-b (ca. 13.4– is definitively of the Chindadn Complex, based on directly associated dates to three Chindadn points. Additional undated Chindadn bifaces and associated lithics of the deflated West Lobe basal loess stratum are either formed tools exclusive to OP I-b (Hypothesis 1) or perhaps a mixed Allerød assemblage related to both OP I-a and OP I-b (Hypothesis 2). This poster will present accumulated raw and calibrated radiocarbon dates, stratigraphic and areal distribution across the site, and correlation with other regional sites on the Yukon-Alaska borderlands.

Easton, Norman (Yukon University)

[120]

Discussant

[120]

Chair

Easton, Norman [49] see Chan, Ching Yi (Mavis)

Easton, Norman [120] see Handley, Jordan

Easton, Norman [49] see Hutchinson, Vance

Easton, Norman [120] see Rasic, Jeffrey

Eberl, Markus (Vanderbilt University)

[292]

Discussant

Ebert, Claire (University of Pittsburgh), M. Kathryn Brown (University of Texas, San Antonio), Lauren Sullivan (University of Massachusetts, Boston) and Jaime Awe (Northern Arizona University)

[251]

Rising from the East: The Preclassic Foundations of Lowland Maya Societies in Belize

The Preclassic period (1200/1100 BC–AD 300) represents one of the most significant cultural transitions for lowland Maya societies. Over the course of ~1,500 years, communities settled permanently on the landscape, committed to agriculture, and began building monumental constructions. By the end of this era, most people

lived in highly stratified societies, and large cities dominated the social and political landscape. Though evidence for Preclassic occupation is rare in the Maya lowlands, over a century of archaeological research in Belize has provided one of the richest records of the Preclassic Maya and their lifeways. Research in western and northern Belize was among the first to document pre-Mamón occupation in the lowlands, confirmed by robust programs of ceramic analyses and radiocarbon dating. Pioneering studies on the production of chert, obsidian, greenstone, and marine shell craft production have also illuminated our understanding of Preclassic interregional economic interaction. Extensive excavations across Belize also illustrate the precocious use of Preclassic architecture by emergent elites, with subsequent monumental buildings reflecting the rise of divine kingship and importance of ancestor veneration. We review these important contributions, which allow us to compare Preclassic cultural development across Belize and to understand these developments elsewhere in the Preclassic Maya world.

Ebert, Claire [295] see Hoggarth, Julie

Ebert, Claire [283] see Messinger, Emma

Ebert, Claire [318] see Roa, Ian

Ebert, Claire [199] see Smith, Audrey

Ebert, Claire [266] see Suarez, Nicholas

Eberwine, James (TRC) and Erin Powers (TRC)

[131]

Nineteenth-Century New Orleans in the Lower Mid-City Neighborhood

TRC, on behalf of the Louisiana Office of Facility Planning and Control, recently completed the Section 106 consultation associated with the multiyear investigations of the new Medical Center of Louisiana at New Orleans. This new hospital project, which was a FEMA-funded recovery project resulting from damage to the old Charity Hospital during Hurricane Katrina, led to the archaeological examination of 14 city squares in the Lower Mid-City neighborhood of New Orleans. While TRC did not complete the excavations, we were responsible for limited data analysis and report writing. This paper will summarize those efforts and examine nineteenth and early twentieth-century lifeways in this once vibrant neighborhood.

Echauri, Ileana (Instituto Nacional de Antropología e Historia) and Christophe Helmke (University of Copenhagen)

[230]

Espacios subterráneos en Yaxchilán: Las cuevas como elementos modeladores del paisaje constructivo

A lo largo de tres temporadas de campo el “Proyecto Investigación Arqueológica en Yaxchilán y su entorno. Área del Meandro en el Usumacinta”, se ha centrado en realizar el reconocimiento de superficie de toda el meandro sobre la que se asienta Yaxchilán. Como parte de este proyecto, se detectaron alrededor de 20 pequeñas cuevas con materiales arqueológicos. Varias de éstas tienen asociados algunos de los conjuntos arquitectónicos más relevantes del sitio, tal como la Pequeña Acrópolis o la Acrópolis Sur. El propósito de la presente ponencia es mostrar la ubicación de dichos parajes, sus características y evidencias arqueológicas asociadas, así como su relación con los monumentos arquitectónicos de Yaxchilán y algunas canteras. Es así que podremos comenzar a delinear algunas hipótesis sobre la configuración del paisaje construido y en el papel activo de dichos espacios subterráneos dentro de la actividad ritual del sitio, en vista de que las cuevas con evidencia de actividad humana se ha detectado más allá del área monumental. Todo ello teniendo en cuenta las asociaciones simbólicas de dichas cavidades las cuales forman parte importante del paisaje ritual como portales al inframundo.

Echavarri, Mikhail (University of Washington), Emily Peterson (University of Washington), Joss Whittaker (University of Washington) and Peter Lape (University of Washington)

[50]

No Source, No Problem: Evaluating Connectedness from Geochemical Analysis of Pottery with a New Python Tool

Compositional analysis techniques, such as laser ablation–inductively coupled plasma–mass spectrometry (LA-

ICP-MS) in combination with petrographic analysis, have been used to generate high-resolution comparison of clay sources, pottery, and pottery manufacture sites. Studies that utilize these methods provide strong evidence for intrasite interactions. This paper aims to lower the barrier to entry for researchers interested in the network analysis possibilities of chemical analysis. We present a new tool in Python called ArchyConnect that aids in the rapid analysis of compositional data and ease of collaboration. We also focus on a type of network analysis, connectedness, that simultaneously provides strong inferences about past interactions and is a more feasible supplement to provenance studies. Connectedness allows us to see useful information from pottery assemblages even when the geographic location of the source of clay or temper is unknown. It also provides a strong framework for diachronic network analysis across sites. We believe that these two innovations vastly expand both the amount of useful ceramic data available to archaeologists, and the number of archaeologists who can contribute.

Echenique, Ester, Francisca Gili (CIDOC UFT, Fundación El Olivar), Paola González (Sociedad Chilena de Arqueología, Fundación El Olivar), Daniel Pavlovic (CIEM Aconcagua) and James Davenport (University of Missouri)

[37]

Diaguita Pottery, Technological Traditions, and Changes during the Late Intermediate and Late Periods: A Petrographical and Chemical Approach

Studies of Diaguita pottery have advanced toward the definition of decorative styles. In this regard, new studies and radiocarbon dating from the El Olivar archaeological site have significantly contributed to a new understanding of pottery traditions and chronological assignments of ceramic styles. The purpose of this work is to explore pottery traditions and their changes from a technological perspective that allows us to delve into the relationship between production practices and the formation of cultural entities. Specifically, we seek to approach technological traditions and their possible changes through the study of technological choices, especially the selection of raw materials and the formulation of paste recipes, using an archaeometric perspective. In this work, we combine petrographic analysis with neutron activation analysis of ceramics from the El Olivar site in Coquimbo, Chile. The results indicate that raw materials were acquired locally and pottery production occurred under two different technological traditions characterized by the temper selection (diorites and volcanic rocks respectively). Additionally, the chemical results show some variability, which may imply the use of different clay sources, possibly indicating different production groups.

Echeverría, Javier [27] see Lema, Veronica

Echeverría-Almeida, José (Universidad Técnica del Norte Ibarra)

[220]

El cacicazgo en la experiencia de los Caranquis-Cayambis en la Sierra y en Daule, costa del Ecuador: Una aproximación desde la etnohistoria y la arqueología

En la sierra norte del Ecuador, la cosmovisión andina, la geografía con su mosaico de nichos ecológicos, diversidad de recursos, y la necesidad de una seguridad social y alimentaria, exigió un sistema de gobierno práctico y muy visible, para resolver los problemas ecológicos y de adaptación y lograr que la población se prolongue en el tiempo. Para entender este proceso es oportuno plantearse una serie de interrogantes: ¿cómo se logró mantener el derecho de pertenencia al grupo y cuáles fueron los medios empleados para indicar afiliación o exclusión? ¿Cuáles fueron las funciones desempeñadas por los sacerdotes o chamanes? ¿Las fiestas colectivas fueron una manera social de ratificar la pertenencia a un determinado cacicazgo? Desde la interacción “con los de afuera”, ¿qué rol jugaron las sociedades vecinas y diversas, al respetar las identidades diversas? ¿El cacicazgo fue hereditario? ¿Los cacicazgos fueron formas de gobierno despótico, aceptados libremente por una población que se acostumbró a obedecer bajo un simple cálculo de costo-beneficio? ¿Esta forma de gobierno fue una construcción propia o hay influencia de las poblaciones barbaocas que llegaron al territorio de lo que hoy es Ecuador?

Eckert, Suzanne (Arizona State Museum, RPA), Deborah Huntley (Tetra Tech Inc.) and Judith Habicht-Mauche (University of California, Santa Cruz)
[287]

Petrographic and Lead-Isotope Analysis of Pottery from Goat Spring Pueblo, New Mexico

Research at Goat Spring Pueblo, a village located in the Rio Abajo region of south-central New Mexico, examines cultural continuity and transformation in the late Ancestral Pueblo period (AD 1300–1680). This poster reports data concerning local versus nonlocal pottery production and vessel exchange at Goat Spring Pueblo, which was located at the border between Zuni and Piro lands. These analyses demonstrate that the clay used to make both undecorated and decorated pottery originated from rhyolite rock outcrops in the area. Not surprisingly, given the village's location along a trail that connected Western and Eastern Pueblo villages, nonlocal pottery recovered at the village was produced at contemporary Pueblo villages in a variety of other regions. In addition, the lead used to make paint on local glaze-painted wares was not coming from the sources near Goat Spring Pueblo but rather from over 100 miles away to the east. Overall, our results show that potters at Goat Spring Pueblo who were actively making vessels for a variety of functions, and that residents of Goat Spring Pueblo were participating in broader Rio Grande exchange networks through time, in part to gain access to some resources required to produce glaze paint.

Eckert, Suzanne [33] see Burgess, Blaine

Eckert, Suzanne [287] see Schleher, Kari

Edgar, Heather [197] see Rangel, Esteban

Edgcomb, Owen (Vermont State University), Luigi Travaglini (Vermont State University) and Sam Angelini (Vermont State University)
[203]

Made in Vermont: Highlighting the Rich and Complex History of the Vermont Marble Company through 3D Imaging
Vermont has a rich and deep historical connection to the marble industry of the nineteenth and twentieth centuries. Virtually synonymous with this legacy is the Vermont Marble Company (VMC), headquartered in Proctor Vermont. As one of the largest producers of marble in the world, VMC marble was used in constructing the United States Supreme Court building in Washington, DC, and master sculptors and quarry workers from around the world moved to Vermont to work for the company. In this poster we share the use of 3D imaging by the Vermont State University-Castleton Innovation lab to help bring the history of the VMC to life. A variety of significant artifacts and items representing the history of the company have been scanned, including the tools and models used by artisan carvers, as well as the billy clubs used by strikers and strike breakers during periods of labor unrest. Through the use of 3D imaging technology, the detailed history of the Vermont Marble Company can be better preserved and shared with the general public, allowing for a broader visibility and a renewed appreciation for the rich and complex history of the marble industry in Vermont.

Edmonds, Emily R. (University of Nevada, Las Vegas), J. Cristina Freiburger (University of Nevada, Las Vegas) and Kathleen Stansbury (University of Nevada, Las Vegas)
[211]

Updated Demographic Profile of a Commingled Assemblage from Durango, Mexico

The cave site EDR 9-7 is located in the Rio Zape Valley of Durango, Mexico, within a transitional region between Mesoamerica and the American Southwest. EDR 9-7 can answer questions about environmental variation and cultural resiliency due to its initial use as a mortuary feature during a period of environmental stress, as well as its long-term repeated occupational history by the Loma San Gabriel (AD 600–1450). Previous research at this site has focused on intentional nonadult burials with evidence of stress and malnutrition and implications of ritualized sacrifice. The commingled assemblage associated with these burials has never been analyzed and has the potential to offer new insights into the community that repeatedly

returned to the cave. Analysis of the minimum number of individuals (MNI) reveals that individuals were deposited in the cave after the initial ritual event regardless of age or sex. The commingled assemblage also shows evidence of malnutrition and infection, indicating continued physiological stress in the region. The demographic profile based on the MNI identifies those who were most at risk for physiological stressors during times of environmental variability as well as who was included in this sacred mortuary space.

Edwards, Alysha (University of Montana)

[265]

A Phylogenetic Approach to Analyzing Lithic Stone Tool Morphology in Southern British Columbia

As one of the most significant hydrological systems in British Columbia, the Fraser River drainage basin holds sociocultural and economic significance both presently and in the past. Archaeologically, sites located within the vicinity of the Fraser River exhibit evidence of extensive trade and social networks between cultural groups from as far north as present-day Prince George where the river flows south through the center of the province before eventually reaching the present-day coastline of Vancouver. Can the history of lithic technological variation along this route be detected using a phylogenetic analysis? Given the abundance of archaeological evidence for trade and social networks in this area, a macroevolutionary approach to understanding artifact assemblages should give indication of the timing and process of cultural transmissions. Using phylogenetic methods, this study will test three hypotheses regarding the evolutionary history of tool morphologies in consideration of the geographic distribution of sites and the timing and nature of stylistic changes along the southern portion of the Fraser River watershed.

Edwards, Briece (Confederated Tribes of Grand Ronde)

[133]

Chair

Edwards, Briece (Confederated Tribes of Grand Ronde) and Michael Lewis (Confederated Tribes of Grand Ronde)

[133]

From McLoughlin and Mills to Ikanum and Inclusion: Broadening the Understanding of tumwata (Oregon City) History through Indigenous Historiography

Emergent Indigenous place theories are developing effective “gaps analyses” of archaeological and historical datasets caused by the social contexts in which existing dominant culture narratives have been written, interpreted, and projected. Archaeological and historical methodologies for researching and re-centering the stories of historically excluded communities are less well developed. In this paper, we present a decolonizing approach and application to historical and archaeological data as developed by the Tribal Historic Preservation Office of the Confederated Tribes of Grand Ronde. Grand Ronde’s understanding of significant places is necessarily “verbed”—that is, centered in practices that are continuously enacted by people of/in that place since time immemorial. Ikanum (traditional stories) and oral histories are the framework for understanding these relationships, both during the millennia of indigenous lifeways and during the last two centuries of Euro-American encroachment and colonization. Using tumwata (Oregon City) as a case study, we outline changes and continuities in practices such as working, meeting, hosting, and exchanging across different periods of history. Emphasizing practice helps amplify and center narratives of those people and communities “hidden in plain sight,” resulting in expanded narratives, richer contexts, and more complete and accurate understanding of place in a manner accessible to all.

Edwards, Briece [262] see Lewis, Michael

Edwards, Nicolette (Southern Methodist University), Karen Lupo (Southern Methodist University), Dave Schmitt (Southern Methodist University) and Michael Richards (Simon Fraser University)

[201]

Foraging for Answers: A Preliminary Analysis of Contemporary Central African Forest Forager Diets via Stable Isotopic Analysis

Stable isotopic analysis is commonly used to assess dietary patterns among prehistoric hunter-gatherers. However, although the use of this method is prolific in archaeological contexts, its application in contemporary settings is minimal. In addition, an approach that can provide more accurate assessment of what individuals actually consume, such as stable isotopic analysis, is warranted. An ongoing ethnoarchaeological project among contemporary Central African forest foragers aims to fill this gap in the literature and provide critical insight into their dietary patterns via stable isotopic analysis of carbon, nitrogen, and sulfur from hair—a quantitative, independent measure of diet. This project presents an initial look of Bofi and Aka forest forager women, men, and children's diets reflecting dry season consumption behavior. The results of this project provides critical insight into Bofi and Aka forager dietary patterns across the entire population, allowing us to understand their dry season isotopic signature patterns for future comparison against wet season data, as well as an initial evaluation into whether significant dietary differences exist between different portions of the population (i.e., women vs. men). These results also provide an important reference to better understand prehistoric forager dietary patterns.

Edwards, Richard (University of Wisconsin, Milwaukee Archaeological Research Laboratory Center)

[96]

Chair

Edwards, Richard (University of Wisconsin, Milwaukee; Archaeological Research Laboratory Center)

[96]

Houses to Villages: Exploring Late Precontact Communities in the Great Lakes Region

Structures, especially houses, are focal locations, acting as a venue for a myriad of social actions. Analyzing the size, shape, orientation, and context of houses individually and as a group allows for multiscale interpretations of past communities. This paper explores variation and organization of structures at a series of Late Precontact (ca. AD 1100–1400) village sites in the western Great Lakes region. Specifically, the paper will investigate variation within and among village sites to explore its implications for function, village organization, and community dynamics.

Edwards, Timothy (University of Tulsa) and Miriam Belmaker (University of Tulsa)

[113]

Bronze and Iron Age Urban Ecology in the Galilee

Micromammal remains have proven to be successful proxies for conducting zooarchaeological research and reconstructing paleoenvironmental conditions in the Levant. Their success as a paleoecological proxy is due to their sensitivity to climatic change, specific ecological niche, and low rate of human interaction. While there is abundant research on micromammals from prehistoric periods of the Levant, little research has been done using micromammals as environmental proxies in historical periods which are most often represented by urban environments. These areas are crucial for understanding human social organization and humanity's impact on local ecosystems. To address these gaps, we sourced micromammal remains of individuals weighing less than 3 kg primarily from Bronze and Iron age sites located in northern Galilee. Using community structure, biogeochemistry, geometric morphometrics, and taphonomy, we reconstructed the ecology of the historic urban environment and the level and impact of human occupation on the local micromammal ecosystems.

Eeckhout, Peter and Lawrence Owens (University of Winchester, UK)**[212]***Sacrifices, Retainers, or Disposal? The Social Roles of Ychsma Children from Funeral Contexts at the Site of Pachacamac*

The excavation of numerous subadult burials from late prehispanic contexts at Pachacamac led us to question the archaeological and anthropological criteria used to identify human sacrifice. Identifying this practice requires a robust conceptual framework and analytical approach, and this is particularly necessary when dealing with subadults. The frequent association of subadults with adult burials or in unusual locations or positions raises the question of retainer burials, as well as the manner in which nonnormative subadult interments should be perceived: namely, differentiating between reverence, pragmatism, and indifference. These questions are addressed by drawing on a corpus of several hundred individuals from Pachacamac, Peruvian Central Coast, spanning five centuries of occupation at the site.

Eeckhout, Peter [158] see Luján Dávila, Milton

Eeckhout, Peter [53] see Suarez Gonzalez, Nathalie

Eerkens, Jelmer [272] see Fournier, Nichole

Eerkens, Jelmer [20] see Haas, Randy

Efford, Meaghan (University of British Columbia), Michelle George (Tsleil-Waututh Nation), Spencer Taft (Tsleil-Waututh Nation), Jesse Morin (University of British Columbia) and Villy Christensen (University of British Columbia)**[87]***A Fish-Focused Menu: An Interdisciplinary Reconstruction of Precontact (1792 CE) Tsleil-Waututh Diets*

Food is more than simply fuel; it is one of the most significant ways in which humans connect with each other, within and across communities, and to their environments and homelands. This research is grounded at t̄əmt̄ə́míx̄w̄t̄ə́n, a large ancestral village site in what is now known as Burrard Inlet, British Columbia, Canada, in the traditional, ancestral, and unceded territory of Tsleil-Waututh Nation. We draw on the archaeological record, Tsleil-Waututh oral histories and testimony, fisheries ecology, and historical records to build an estimated ancestral diet. We estimate the maximum carrying capacity of Burrard Inlet before European contact, meaning the number of people the Inlet could sustain over generations without causing environmental or species degradation. Based on prior work, we assume a high protein diet that is primarily (90%–100%) from marine and intertidal sources. We consider the caloric needs of adults, children, elders, and those who are pregnant or lactating. Finally, we consider the variation in the edible yield from different animal species, and their relationships in the food web. We use a precontact model of the Inlet, built using fisheries modeling software Ecopath (EwE), to test the diet and determine if it would have been sustainable over the long term. Efrain, Kaarina [225] see Marks, Theodore

Egan, Rachel, Shaun Rose and Jared Orsi (Colorado State University)**[206]***The Home and the Hearth: Reconstructing Race and Ethnicity at the Starkville Mine and Town*

The southern coalfield in Colorado played a significant role in the growth of the American steel industry in the late nineteenth and early twentieth centuries. With the availability of bituminous coal, which can be refined into coke, the region became a key producer of high-grade coal, with Starkville Mine emerging as a major player. The mine and its associated town were instrumental in shaping the social and cultural fabric of the coal-mining industry in the American West, thanks to the Colorado Fuel and Iron Company's (CF&I) Sociological Department. This department implemented various programs to promote unity and downplay racial and ethnic differences while bringing in a diverse and cheap workforce. However, despite the efforts to standardize their way of living, the people of Starkville demonstrated remarkable agency, asserting their own decisions and influencing their own lives, as best illustrated continued of traditional Mexicano practices in the

home and the hearth. This paper explores the complex interplay between dominant forces and individual agency in the coal-mining industry of the American West

Egeland, Charles (UNC-Greensboro)

[323]

Chair

Egeland, Charles [323] see Schwendler, Rebecca

Égüez, Natalia (University of La Laguna, Spain)

[151]

Discussant

Égüez, Natalia (University of La Laguna, Spain), Oula Seitsonen (University of Oulu), Sarah Pleuger (University of Edinburgh), Jamsranjav Bayarsaikhan (Max Planck Institute for Geoanthropology) and Jean-Luc Houle (Western Kentucky University)

[151]

Settlement Persistence in Northwestern Mongolia: Archaeological and Paleoenvironmental Insights from the Long-Term Occupation Site ZK513

The Mongolian Bronze Age (2500–700 BCE) was a period of greater social interaction and important transformations (e.g., the adoption of domestic livestock herding and intensification to widespread mobile, mounted pastoralism) that prompted social inequality and the formation of the first nomadic states. What is known today from past Mongolian pastoral societies comes primarily from studying highly visible features such as funerary monuments and rock art. However, little is known about the archaeological evidence preserved in their daily contexts. Recently, the excavations at ZK513 winter campsite in Uvs aimag have revealed clear-cut stratigraphic layers originating from recurrent use of the locality for over 4,000 years, with new excavated combustion features and burnt layers containing organic remains such as herbivore dung and bones. Through a multiproxy approach that includes soil micromorphology, zooarchaeology, and lipid biomarkers analyses, we retrieved the micro, macro, and biomolecular signatures left in ZK513 by the recurrent occupation of nomadic pastoralists and their livestock. The integration of distinct but complementary proxies allows us to investigate shifting environmental conditions, anthropic activities, as well as continuities and discontinuities in the occupation. We finally discuss how our combined approach could be applied to other mobile pastoral archaeological contexts in Mongolia and elsewhere.

Eichenberg, Erin [41] see Freund, Kyle

Eichner, Katrina (University of Idaho)

[10]

Discussant

Eichner, Katrina [184] see Warner, Mark

Eichstaedt, Michael [140] see Donop, Mark

Eighmey, James [23] see Rosen, Arlene

Eisenstein, Hope [47] see Wesp, Julie

Ek, Jerald (Western Washington University), Sam Barr (Stillaguamish Tribe), Beatrice Franke (Stillaguamish Tribe), Tayna Greene (Stillaguamish Tribe) and Kerry Lyste (Stillaguamish Tribe)

[6]

x^{wiq}wix^{walq}wu? - Coast Salish Community-Based Participatory Archaeology in Practice

The *x^{wiq}wix^{walq}wu?* project is a partnership between the Stillaguamish Tribe Cultural Resources Department and the Department of Anthropology at Western Washington University designed to reorient archaeological practice to address the concerns of Indigenous communities. Implementing a community-based participatory framework, the program seeks to decenter Western academic interests and create a meaningful connection between the Coast Salish past and present that foregrounds the knowledge, experiences, and values of community members. Instead of academic research questions, the goals of the first phase of this program focused on relationship-building and generation of more inclusive pathways to participation in archaeological practice. This presentation outlines the successes and challenges we encountered during the first two field seasons of the program, as well as areas of emphasis for future collaboration. Further, this paper identifies structures within academia that serve as impediments to institutional change and potential pathways to overcome these challenges.

Eklund, Emily, Jargalan Burentogtokh (National University of Mongolia) and William Gardner (Yale University)

[23]

Exploring Bronze Age Mongolian Monuments with Geophysical Methodologies

For mobile pastoralists, monuments are places of permanence and stability in a landscape inhabited and perceived through movement. It is within these monumental spaces that dispersed peoples gather as a community, and through secular and ritual activities, organize and reaffirm social bonds and institutions, and maintain wider community connections. These dynamics have been an important scholarly focus within anthropological archaeology in many regions of the world. In recent years, there has been an increasing interest and debate in the connection between complex monument construction and deep structural shifts in the social organization of pastoral nomads in Mongolia during the Bronze Age (1800–800 BCE). This presentation will investigate this through the implementation of multiple complimentary geophysical techniques, including fluxgate gradiometry and magnetic susceptibility, at two khirigsuur monumental complexes in Tarvagatai Valley in north-central Mongolia. This innovative research design utilizes novel field methodologies that are nonintrusive and allow archaeologists to analyze the spatial patterning of these spaces in finer detail at a larger scale. This analysis of these spaces creates a more nuanced understanding of the deep relationships between these culturally anchored landscapes and their intrinsically linked communities as we recover further evidence for the locationality of past activities.

Ekwuocha, Ifeoma [172] see Burnett, Jeff

Elashvili, Mikheil [38] see Zimmerman, Michael

Elder, Jason (University of Alaska, Fairbanks), Amelia Jansen (University of Alaska, Fairbanks), Scott Shirar (University of Alaska Museum of the North) and Justin Cramb (University of Alaska, Fairbanks)

[200]

A Faunal Analysis of the Outlet Site (XHP315), Etivlik Lake, Northern Alaska

Located on the shore of Etivlik Lake in the Brooks Range in Northern Alaska, the Outlet Site (XHP315)

consists of numerous late Holocene pit houses. One of these house features (#74) was excavated in 2006 during a University of Alaska, Fairbanks, archaeological field school. Faunal analysis was undertaken by a zooarchaeology class during fall semester of 2022 and the results identified several patterns indicative of prey selection behaviors. Over 12,000 bones and bone fragments were analyzed with a majority of the identified specimens belonging to *Rangifer tarandus* (caribou). This poster presents and discusses the results of the initial faunal analysis and explores characteristics represented in the assemblage that provide insight into prey selection behaviors by the people that once lived at this site.

El-Hassan (Sokhari), Ahmed [55] see Minor, Elizabeth

Elkin, Dolores

[158]

Chair

Elliff Cruz, Laura [73] see Bryant, Laura

Elliff Cruz, Laura [72] see Taylor, Marla

Elliott, Deirdre (Nunatsiavut Government) and Corey Hutchings (Nunatsiavut Government)
[307]

Heritage Management in Nunatsiavut: Policy in Action

The heritage landscape in Nunatsiavut, and in the north more generally, is changing rapidly and in ways that demand changes in how we approach heritage management. Nunatsiavut holds 7,000 years of human history, and the importance of protecting and promoting this history is attested to in the Labrador Inuit Land Claims Agreement, which confers considerable authority, but also considerable flexibility, over archaeological and cultural resources. The Nunatsiavut Government is relatively young, and heritage policy is still being written. Recent developments and significant changes in the fields of archaeology, collections management, and repatriation have been guiding our recent policy work. We discuss how we are striving to build heritage policies that are robust enough to encompass the full breadth of the Nunatsiavut Government's legislated authority, but also flexible and resilient enough to respond to the logistical challenges common to many remote northern communities.

Elliott, Deirdre [307] see Hutchings, Corey

Ellis, Kelsey

[281]

Cast Your Nets: The Island Economy and Ecology of Gotland within the Larger Viking World

In recent decades, more archaeological scholarships have been dedicated to understanding the types of exchanges that were occurring in the Viking world in the early Medieval period. Particularly, Gotland remains one of the key trading centers regarding smithed exported silver. Looking broadly at Gotland and its relations to other periphery sites, such as Grobina in present-day Latvia and Salme in present-day Estonia, how was Gotland's trade influenced by its island geography and ecology? My research aims to look at the ways Gotland's success in the Viking network derived from maintaining larger trading networks to other periphery sites, by comparing it to other island economies within the period.

Ellis, Meredith (Florida Atlantic University)

[89]

The Making of the 1928 Hurricane Victims 1 and 2: Excavating Identity in an Unknowable Legacy Collection

In traditional bioarchaeological practice, the first scientific identities fixed to skeletal remains are the labels given to them when they are excavated. From there, the basic information about the remains is built from those first identifying features associated with the site. But what happens if the remains are encountered for the first time long after that process, when the meaning of those first identifiers is lost? How can we rectify an identity that is absent any context, yet permanently inked on cardboard? This case study will examine the two commingled skeletal individuals labeled 1928 Hurricane Victims 1 and 2 Belle Glade, first encountered in the storage space at Florida Atlantic University by the presenter in 2016. There is no paper trail for these individuals, and skeletal preservation is extremely poor. Thus, the only way of “knowing” these individuals is through the markings on the Motts Apple Cider boxes in which they were found. How do our research projects change when these assumed, but unprovable, identities drive the questions that are being asked? The 1928 Hurricane Victims 1 and 2 illustrate both the limits of bioarchaeology and also the power of scientific naming processes to structure entire programs of research.

Ellison, Jenny (Canadian Museum of History)

[305]

Transforming Policy and Museum Practices: Decolonizing Frameworks and UNDRIP in Canada

The Canadian Museum of History, a national collecting institution dating back to the mid-1980s, has undergone many transformations throughout its history, including to its name, mandate, and location. This presentation will outline how community collaboration and collections access has transformed in response to changing ethical, legal and policy frameworks at Museum and in Canada. While the Museum has a 50-year history of collaboration with communities and repatriation, it continues to grapple with the implications of its 150-year legacy and the colonialism embedded in its collecting practices. Recent policy transformations will be shared to show how the museum is working to incorporate decolonizing frameworks into its day-to-day operations. This work goes beyond a repatriation policy and legal obligations, to a reconsideration of the way that research, collections access, collections management, and programming is developed. It will show how the interconnected work of policy, strategic direction, and changes in the national governance of Indigenous cultural heritage (Bill C-15, UNDRIP and the Truth and Reconciliation Commission) are shaping museum practices in the present and for the future.

Ellison, Leigh Anne (University of Hawai'i, Manoa)

[173]

An Evaluation of Digital Data Management Literacy among Early Career Archaeologists

This presentation examines digital data management literacy among early career archaeologists by evaluating Data Management Plans submitted as part of successful National Science Foundation Dissertation Improvement Grant (NSF-DIG) proposals. Preliminary research has demonstrated an improvement in digital data management literacy since the inception of the Data Management Plan as part of an NSF-DIG grant proposal in 2010. This presentation will present the results of the NSF-DIG data management plan proposal evaluation, identify gaps in data management literacy, and suggest strategies for improvement.

Ellis-Topsey, Cynthia [295] see Robin, Cynthia

Elmore, John Robert, III [73] see Bowers, Kellie

Elston, Robert [35] see Zeanah, David

Emerson, Paige [26] see Pezzarossi, Guido

Emery, Kitty (Florida Museum, University of Florida) and Ashley Sharpe (Smithsonian Tropical Research Institute)**[222]**

Trajectories of Zooarchaeological Research across Central America: The Influences and Interests of Richard Cooke
 Archaeological research in Central America is often seen as quite disparate between the northern regions of Mesoamerica (primarily Mexico, Guatemala, Belize, and northwestern portions of Honduras and El Salvador) and the more southerly Intermediate Area (including Honduras, El Salvador, Nicaragua, Costa Rica, and Panama). Zooarchaeology, however, has taken a slightly different path. Through researchers like Dr. Richard Cooke with his wide-ranging interests and international network of colleagues, particularly across the Americas, zooarchaeologists have had considerable success collaborating and sharing ideas between research zones. In this paper we use publications and archival records from the Smithsonian Tropical Research Institute (Panama) and Florida Museum of Natural History at the University of Florida, as well as our own personal history of zooarchaeological research with Richard in the various regions of Central America, to explore the issues of mutual interest across the broad region. We include perspectives on fish, turkeys, macaws, dogs, deer, and examine the use of animals as food, artifacts, symbols, and the impacts of humans on animals through landscape modification, exploitation, and husbandry.

Emery, Kitty (Florida Museum, University of Florida)**[280]***Discussant*

Emery, Kitty [260] see Boileau, Arianne

Emery, Kitty [183] see Thornton, Erin

Emery, Matthew [24] see Gilleland, Sarah

Eminli, Jeyhun [284] see Johnson, Kimberly

Eminli, Jeyhun [42] see Fiore, Matthew

Emmons, Sophia and Gabriel Prieto (University of Florida)**[117]**

Analyzing Stone Fish Net Sinkers in the North Coast of Peru: Inquiring its Functional and Symbolic Aspects
 Maritime communities flourished along the northern coast of Peru for thousands of years due to the abundance of marine life, which inspired these communities to create specialized tools to aid in the fishing process. One of these tools was cotton fishing nets of which the attached stone sinkers are more commonly found in midden deposits. This study analyzes the variability of the fish net sinkers from two sites in Huanchaco, Peru: Pampa La Cruz, and Jose Olaya, Iglesia Colonial. Additionally, this study will compare the differences in stone net sinkers between cultural occupations spanning over centuries starting with the earliest of the Salinar occupation (400–200 BC), the Virú (BC 100–AD 450/500), and the Moche (AD 450/500–800/850). By analyzing the similarities and differences between the fishnet sinkers, one can infer the types of fishing nets used by maritime communities and their subsistence and social implications. In addition, fishnet sinkers found in ceremonial contexts had evidence of being intentionally broken in half, showing that they were possibly part of elaborate rituals. Studying these lithics gives insight into the integral nature of fishing in people's daily lives and the ceremonial practices that occurred in these Andean maritime communities.

Eng, Jacqueline [23] see Hrivnyak, Michelle

Engelbert, Lynne**[329]***Approaching Extensive Damage at Historic Cemeteries Using Canine Detectors*

Historic cemeteries do not “age” well. Many factors contribute to the degradation of cemeteries. The constant shifting of soil, rodents, vegetation, vandalism, and now we are facing an even bigger threat with climate change, including floods, fires earthquakes, mud slides, hurricanes, etc. How do we approach burials that have been lost or damaged over time? The specially trained dogs with the Institute for Canine Forensics (ICF) are one of the few ways to locate lost burials in a noninvasive manner. For close to 25 years, ICF has been working with archaeologists, tribal entities, state and federal park services, and cultural resource management to help locate historic and precontact burials so they can be protected. ICF’s dogs bring another “layer” to archaeology. Dogs can access sites that cannot be explored by other means. They are the only “tool” that can locate the scent of human remains. A recent project at the Vicksburg National Cemetery is a case-in-point. A landslide obliterated a section of the cemetery. Remediation couldn’t begin until the number of graves impacted could be determined. Bring in the dogs! The National Park Service did that and the results allowed successful remediation to begin.

Ennahid, Said (Al Akhawayn University) and Néjat Brahmi (École Normale Supérieure)**[95]***Sharifian Letters: Conducting Archaeology in Pre-Protectorate Morocco (1884–1891)*

One of the recurrent themes of French colonial period discourse on conducting archaeology in Morocco was the belief that the state and the people had little or no interest in their pre-Islamic past or its material correlates. To explore and deconstruct this theme, we will examine a set of never-before-published archives consisting of eight firmans (also called Sharifian Letters), which were royal authorizations from Sultan Moulay Hassan I allowing Henry Poisson de la Martinière to conduct his scientific expedition to Morocco (1884–1891). This paper will consist of (1) a close analysis of these Sharifian Letters in terms of content (e.g., the terms used for archaeology, excavation, artifacts, to mention a few) and form, and (2) a close analysis of Henry de la Martinière’s correspondence with his contemporaries as they viewed themselves as the rightful heirs to Rome. As Ennahid stated elsewhere, “Archaeology was to serve as a powerful tool to establish a material connection between the old colonizer and the new one, and, consequently, to legitimize the Protectorate’s appropriation of Morocco’s classical heritage.” Preliminary analysis of the firmans’ language shows a genuine concern, within the royal court of Morocco, for the preservation of the country’s archaeological heritage.

Enriquez, Alejandro (Illinois State University)**[21]***Human Sacrifice or Blood Libel: Accusations of the Ritual Killing of Maya Children in 1562 Yucatán*

This presentation examines the 1562 confessions of Maya ritual murder (“Procesos contra los indios idólatras de Sotuta, . . .” [“Processes against the idolatrous Indians of Sotuta, . . .”]) obtained during the Idolatry Trials led by Friar Diego de Landa in colonial Yucatán. Through an analysis of their context of production, their constitutive elements, and their comparison to other European, Christian anti-Semitic tales, I argue that the confessions of Maya blasphemous crucifixion and human sacrifice are better understood as Franciscan blood libel and ritual murder propaganda against the Maya elites. As someone trained in medieval and early modern literature and cultural studies, I am interested in engaging in cross-disciplinary conversations about the evidence of Maya human sacrifice after the conquest and suggest how interdisciplinarity can be mutually enriching, particularly when dealing with the serious suggestion that the Maya sacrificed their most vulnerable (orphaned or kidnapped youth) to offend the absent friar and the church he represented.

Eppich, Keith (TJC- The College of East Texas)**[314]***Modeling the Social Demography of a Classic Maya City-State, the Case of El Perú-Waka’, Guatemala*

This paper attempts to model Classic Maya society and social dynamics, as expressed at the ancient city-state of El Perú-Waka, Guatemala. Large-scale ceramic analysis, combined with traditional excavation and an ambitious test-pitting program, allow for novel perspectives on the internal functioning of this complex Native American society. The urban society there is characterized by social heterogeneity, with different kinds of social units operating at the time period. These units include noble houses, patrilineages, wealthy commoners, and still others, all present on a socially diverse landscape. Yet, these units changed over time, as shifting historical circumstances favored some modes of social organization over others. This becomes apparent in the archaeological record, especially with newly developed ceramic seriation techniques, which allow for close chronological control of such changes. The composition of the ancient society changed over time, and the ceramics allow for the partial documentation of such change. Thus, at least partially, they allow for the modeling of the social demography of this Classic Maya city-state.

Erau, Céline (University of Cambridge)

[53]

Understanding Animal-Human Interactions during the LIP in the Central Coast of Peru

In recent decades, zooarchaeological studies have been increasing in South America. Nevertheless, combining the methods used to understand some questions related to animal and human interactions in ancient Peru seems crucial. In this paper, we will present the first results of an ongoing multidisciplinary project focused on the central coast of Peru during the Late Intermediate period. A study of the faunal material found at Pachacamac by the Ychsma Project (ULB) shows a distinct use of domestic and wild animals in diet and ritual. The disciplines (archaeology, zooarchaeology, ethnohistory) used so far are insufficient to understand this in greater depth. Hence, iconography and myths are useful in approaching discoveries from new points of view. In the first case, we analyzed the animals represented, their frequency and any associations with other animals/elements. Initial results from the iconography of textiles show that wild animals are more frequently represented. In the case of the myths, we also found a greater presence of wild animals as the main protagonists. Finally, we feel it is necessary to provide a theoretical framework for this research to detach ourselves from a modern European vision and consider the multiple visions/practices of interactions between animals and humans.

Erem, Asli

[100]

Precious Objects and Kingship: A Closer Look at Precolumbian Classic Period Maya Artifacts, Located at the Godwin Ternbach Museum

Throughout thousands of years, various civilizations and groups have depicted their beliefs on objects and architecture. Maya rulers are an example in how architecture, extravagant costumes, jewelry, weaponry, and ceramics were used to emphasize their title as *ajaw*. *Ajaw*, the title for a ruler that represents the king's massive authority for their people and their relationship to bridge the supernatural and natural world together. The Godwin Ternbach museum, located within the Queens College campus, consists of various precolumbian Maya artifacts such as jade pectorals, jade beads, a ceramic vessel, eccentric flints, and a piercing tool. These artifacts depict various Maya mythologies, dynamics of kingship, and their form of storytelling. The project focuses on answering various questions (such as how? When? What? Why?) in regard to the artifacts while gaining experience in 3D scanning. 3D scanning has begun to advance and become affordable, where archaeologists can use their cellphones to retrieve their data. The scans also can be shared online, where the public and researchers can access without the requirement of visiting the artifacts in person. The paper discusses my findings, trial and errors, and solutions to 3D lidar and photogrammetry scanning apps. I hope to share my experience and provide guidance.

Eren, Metin (Kent State University)

[294]

Discussant

Erftenebeck, Hanna (University of Notre Dame)**[169]***Daily Food Practices and the Materiality of the Early Bronze Age Kitchen in the Southern Levant*

The Early Bronze Age (EB IB-III, 3300–2500 BCE) in the southern Levant is marked by significant social, political, and economic changes, as people aggregated into large, often fortified settlements for the first time in the region. These new sites differ in size, environmental setting, and in the degree of social differentiation and political organization. But were these differences reflected in the material record of people's day-to-day practices? Food production, storage, processing, and preparation were central parts of EB daily life, and many of these food-related practices took place within residential spaces. Using evidence from EB houses excavated at Numayra, Jordan and comparing those to residential contexts from other EB settlements in the Southern Levant, this paper investigates the "EB kitchen." I argue that, despite differences in size and social, political, and economic organization, the tools, installations, vessels, and features used for food related practices remained markedly similar in residential spaces at both large and smaller EB sites, suggesting that EB people shared a food habitus throughout the Southern Levant.

Erter, Isabella (Ohio State University), Robert Cook (Ohio State University) and Emiley Gottwald (Ohio State University)**[101]***Seeing is Believing: Re-creating the Past at Turpin with Virtual Reality*

Archaeologists are often good at communicating with each other, but not usually at conveying our findings to wider audiences. This seems particularly true in the US Midwest, where visibility of the remains of ancient sites is low, in contrast to places like the US Southwest. We address this problem by using Virtual Reality (VR) to share information about the precontact component of the Turpin site in southwest Ohio. Specifically, we are creating an immersive reconstruction of the site including the archaeological grid and a variety of maps, photos, and 3D objects that can be examined in their discovery context. This technology can make visible what the site contains with no damage to the resource and can also facilitate remote access to the site.

Escalante, Kirsty (Tulane University)**[226]***Repatriations of Maya Antiquities to Guatemala: Successes, Pitfalls, and Significant Factors*

While scholars have been concerned since the 1960s about the widespread looting of Maya sites to supply the international antiquities market, countless objects have been illicitly exported over the decades from Guatemala and surrounding countries. The repatriation of looted antiquities to their countries of origin has received increased attention as source countries request the return of their archaeological heritage and more objects are repatriated as a result. In addition, Memoranda of Understanding, international treaties, and changes to museum ethical codes and acquisition policies have led institutions and collectors to be more cautious about owning ancient art. Nevertheless, the return of illicit Maya antiquities to their source countries is a relatively recent phenomenon compared to the long history of looting in the area and has varying rates of success depending on an object's individual circumstances. As a result, minimal research exists regarding the variety of repatriation cases and the factors contributing to successful outcomes. By analyzing the return of looted Maya antiquities to the Guatemalan government and the mechanisms through which repatriations have been achieved, this paper aims to outline factors that may lead to successful returns of looted Maya objects in the future.

Eschbach, Krista (University of Mississippi)**[297]***Contrasting Commensality in Colonial Mesoamerica and the Borderlands East*

Native groups developed great diversity in food recipes, preparation techniques, and approaches to commensality. In some regions, such as in the Borderlands East, commensality tended toward communal-style serving vessels and related eating practices. Those practices contrasted with individual-style plates,

bowls, and cups that were used in regions of Mesoamerica. The arrival of European colonizers further added to and transformed regional vessel forms with their use of tables in the practice of commensality. The regional differences in Native traditions likely contributed to the varied adoption of Native serving vessels for the colonial table. I contrast major variations in traditions of commensality in colonial Mesoamerica and the Borderlands East. I then investigate those differences through the distribution of European-style tableware and Native serving vessels recovered from two distinct colonial contexts: the Port of Veracruz and the Presidios of northwest Florida.

Escontrias, Pilar (Seattle University School of Law)

[302]

Anthropologist in Exile: Navigating Loss and Pursuing Justice

Making space for us to love archaeology in its prismatic wholeness is John Pohl's greatest contribution to the field. We first met when I was an undergraduate taking his course on precolumbian art and archaeology of Mexico. He was my only college professor who encouraged me to connect archaeology with my own family history, and who created academic opportunities for me to interrogate how and why such a project mattered today. He supported my applications to graduate school and offered solidarity as I witnessed and endured gendered violence, racism, betrayal, apathy, complicity, and injustice while pursuing my PhD. Although I earned my degree, I honored my trauma and left after graduation to become a lawyer. For the past 17 years, Professor Pohl has been a consistent presence in my memory when I recall what I love most about anthropological archaeology. This paper is in honor of those of us who will always be anthropologists but who love and engage with anthropology from afar: as anthropologists in exile, pursuing justice within the profession as only the forgotten can.

Esdale, Julie (Colorado State University, CEMML), Heather Hardy (Colorado State University) and Whitney McLaren (Colorado State University)

[49]

Taiy Tsadlh (Six Mile Hill) Site Evaluations

Taiy Tsadlh or Six Mile Hill has been used since prehistoric times for a variety of activities, ranging from recreation, a military fuel terminal, ceremony, subsistence, and game spotting. Archaeological investigations have revealed six extensive prehistoric sites further documenting the rich history of the area. Lithic artifacts and tools, as well as faunal remains, have expanded our understanding of prehistoric hunting and gathering subsistence activities. Data derived from these sites regarding lithic raw material acquisition and trade, as well as lithic tool creation, maintenance, and use have contributed to broader patterns of landscape use in the area.

Esdale, Julie (Colorado State University, CEMML)

[326]

Chair

Esdale, Julie [61] see Shelley, Nathan

Eslinger, Emmalee (Washington University, St. Louis), Sarah Kennedy (Carleton College), Karen Durand Cáceres (UywaZooLab), Alexei Vranich (University of Warsaw) and Arturo Rivera I. (SWCA)

[199]

Weaving with Wichuñas in the Coastal Tiwanaku Diaspora: New Insights into Camelid Bone Tool Production from Los Batanes (Sama, Peru)

Textile production was a major economic sector in the prehispanic Tiwanaku state, for which weavers transformed camelid (llamas, alpacas) fibers and bones into utilitarian and decorative objects. As Tiwanaku pastoral communities dispersed in the wake of state collapse, they relocated to arid coastal regions where

their textile industry demonstrates continuity in textile traditions and technological innovations. Excavations of domestic middens at the coastal site of Los Batanes (Sama, Peru), occupied by Tiwanaku descendants in the twelfth century CE, revealed finished and unfinished camelid bone artifacts with morphological similarities to present-day weaving tools. These objects and their broader context provide insight into pastoral, bone tool, and textile production strategies of coastal camelid herders. Here, we present the results of macroscopic and microscopic analyses of the camelid bone tool assemblage from Los Batanes. The sitewide age-at-death profile of the camelid assemblage sets a baseline for evaluating culling practices related to fiber production and preferred ages for tool production. Fracture patterns from unfinished tools are indicators of production sequences, and use-wear patterns compared to ethnoarchaeological studies and bone tools recovered at the highland site of Tiwanaku will determine the artifacts' uses in textile production.

Esparza Olgúin, Octavio [32] see Tsukamoto, Kenichiro

Espenshade, Christopher

[317]

Section 106 and Fish Weirs: Recent Examples

A recent resurgence in fish weir research has revealed limitations in the NRHP evaluation of such sites. With few weirs having been directly dated, and with a general lack of excavation of associated processing sites, it is often difficult to define the chronological context needed for a proper evaluation. In addition, as Section 106 areas of potential effect generally stop at the river's edge, there are few professionally recorded fish weirs for comparative purposes. Examples from recent projects in North Carolina and Maryland are discussed.

Espino Huaman, Richard (Universidad Nacional San Luis Gonzaga de Ica) and Jo Osborn (University of Exeter)

[299]

Inspiration from Beyond the Border or Innovation from Within? Reconsidering the Paracas-Nasca Transition on the Peruvian South Coast

During the final centuries of the Early Horizon (~300–100 BCE), independent Paracas communities across multiple valleys on the Peruvian south coast began an extended process of social, cultural, political, and religious transformation. These changes ultimately culminated with the development of the Nasca cult centered at Cahuachi. The profound changes associated with the Paracas-Nasca transition have often been attributed, at least in part, to the influence of the Topará tradition, long understood as a foreign group which intruded into the Paracas heartland from the north. We present excavation and radiocarbon dating of Jahuay, the earliest accepted Topará site, which contradict this long-held theory and invite us to reconsider how this period of major social transformation unfolded. Instead of looking for answers beyond the boundaries of Paracas communities, we propose turning our gaze inward to consider how competition between the supporters of emergent traditions across and within south coast valleys spurred innovation and transformation.

Espinosa, Silvana, Amalia Nuevo Delaunay, Gisela Cassiodoro and Martin Acuña Lugo

[77]

Changes and Continuities on Recent Past Human Occupations in Continental Southern Patagonia

Human occupation of the last centuries in continental southern Patagonia has been described as a stage in which a great variability of processes stand out, such as the arrival of allochthonous groups, the introduction of new resources such as horses, sheep and industrialized products, the emergence of stable settlements, along with the division of the landscape into livestock production units. All these changes and processes triggered organizational and technological adaptations in the local hunting populations, as well as forms of cattle occupation suitable to each environment. This stage has been approached archaeologically taking into account basins as spatial unit, describing the particularities of the changes and continuities in different locations. In this context, it is especially important to address the research on a larger spatial scale, which

considers global historical processes while highlighting local particularities. Thus, it is proposed to compare the current regions of middle west Santa Cruz (Argentina) and Aysén (Chile), with the aim of describing and understanding their historical trajectories and the current scenario.

Espinoza, Pedro (Ministerio de Cultura del Perú)

[243]

Sobre “actores sociales”, “comunidad” y otros términos esquivos: Reflexiones desde el complejo arqueológico Mateo Salado, Lima, Perú

“Actores sociales”, “comunidad”, “arqueología comunitaria”, “patrimonio arqueológico” y otros términos que se aplican en la gestión de los sitios arqueológicos muchas veces fluctúan entre la ambigüedad o la relativización, o entre el esencialismo y el paternalismo. Las críticas que se les han hecho se han enfocado en cómo enmascaran o legitiman discursos de un poder ejercido verticalmente desde un sistema hegemónico. Pero se ha visto menos cómo su uso soslaya relaciones sociales contemporáneas diversas, cambiantes y contradictorias, las cuales son activadas por el objeto arqueológico. La ponencia plantea una discusión y reflexiones sobre estos términos desde la práctica, es decir desde la experiencia de gestión en Mateo Salado, un gran complejo arqueológico ubicado en medio de la actual ciudad de Lima, capital del Perú.

Esposito, Carmen (University of Bologna)

[334]

Chair

Esposito, Carmen (University of Bologna), Richard Madgwick (Cardiff University), Wolfgang Müller (Goethe University Frankfurt) and Stefano Benazzi (University of Bologna)

[334]

TULAR: Transculturality and Social Innovation in Proto-Etruscan Areas of Pre-Roman Italy

Human mobility has played a vital role in shaping societies, both in the past and present. From the circulation of people to the biocultural integration of individuals, these population dynamics have triggered fundamental transitions in our sociopolitical landscape. The early first millennium BC in Italy was marked by significant geopolitical changes involving extensive population nucleation, recognized as early forms of urbanization and traditionally associated with large movements of people. The TULAR (Etruscan for border) project delves into the question of how changes in human networks influenced the diverse cultural, social, and economic adaptations of ancient communities during the formative period of the Etruscan civilization. TULAR investigates the sites of Pontecagnano, Sala Consilina (Campania region), and Vulci (Latium region), integrating archaeological, osteological, and multi-isotope analysis. This paper compares the first set of data from previous research (Tarquinia, ninth century BC; Fermo, ninth–fifth centuries BC) with ongoing studies on human mobility and discusses them considering their archaeological contexts. ⁸⁷Sr/⁸⁶Sr results on human remains show a high proportion of nonlocal individuals. Future works will help us to unravel these population dynamics, providing a compelling reworking of our understanding of the European Iron Age and revising the traditional narrative of the Etruscan civilization.

Esposito, Carmen [334] see Madgwick, Richard

Estrada-Belli, Francisco (Tulane University)

[159]

Chair

Estrada-Belli, Francisco (Tulane University) and Sandra Balanzario Granados (Instituto Nacional de Antropología e Historia)

[159]

Classic Maya Urbanism at Dzibanche Revealed by Airborne Lidar Mapping

Lidar survey of the city of Dzibanche reveals the city's settlement to be more extensive and populous than previously thought and consistent with its political reach as a hegemonic state. A closer look at the organization of public spaces within its center reveals architectural arrangements that appear to share many characteristics with Preclassic and Early Classic Petén centers. An extraordinarily well-developed system of causeways radiates out of the monumental zone to peripheral plaza groups revealing a vast network of political nodes and associated settlements forming a coherent and well-organized urban landscape interspersed with agricultural fields. The spatial organization and interconnectedness of these elite nodes and associated settlement suggests a concern with optimal flow of goods and people across a dense urban and peri-urban landscape seen only at a few other Maya centers. Lidar images also reveal the largest extensions of wetland agricultural fields ever recorded in the Maya Lowlands suggesting a portentous economic potential for Dzibanche, which may account for its ascent as political and economic superpower during the Classic period and its longevity as a settlement well into the Late Postclassic period.

Estrada-Belli, Francisco [164] see Hannold, Cynthia

Eubanks, Jill (UC Davis; Far Western Anthropological Research Group)

[319]

Investigating Precontact Resource Conservation of Deer Populations in the San Francisco Bay Area

Mule deer were important resources for the Ancestral Ohlone populations in the California San Francisco Bay area. Researchers typically use artiodactyl abundance information derived from archaeological assemblages to understand past hunting and land use behavior. Building on previous models (diet breadth, costly signaling, climate change, and resource intensification) which use a single explanatory cause to explain the artiodactyl abundance, my research investigates how Ancestral Ohlone peoples hunted deer through the analysis of teeth collected from several sites mitigated through cultural resource management practices. Teeth provide a snapshot of each individual by recording information which is accessible through archaeometric methods: proteomics (estimate animal sex), wear patterns (estimate animal age), stable isotopes (e.g., diet, environment, life history, migration patterns, local or nonlocal), and dental cementum increment analysis (estimate animal age and season of death). I expect conservation, or the increase of deer remains to be represented by the differential culling of younger males, which would allow females to successfully reach maturity and produce offspring. The results of this study have potential wide-ranging implications for understanding prehistoric hunting, land-use practices, forensics, and has relevance to modern habitat restoration and species conservation studies by biologists and ecologists.

Evans, Amanda (Gray & Pape Inc.)

[57]

Chair

Evans, Amanda (Gray & Pape Inc.), Louise Tizzard (Wessex Archaeology) and Megan Metcalfe (Wessex Archaeology)

[57]

Geophysical Investigations of Submerged Landscapes: Results from the Northwestern Gulf of Mexico

The authors acquired parametric subbottom and conventional chirp subbottom data over potential submerged and buried landscapes features in the Northwestern Gulf of Mexico. The purpose of the study was twofold: to map out potential preserved features for geotechnical sampling and also to directly compare the efficacy of the two different technologies for subsurface mapping. This paper will summarize the methods used in developing the survey grids and present the results of the landscape mapping. The interpreted landscapes and seismic horizons, as presented in this paper, were used to select locations for sediment cores taken in the next stage of the project. The authors will also discuss the results of the comparison between the two sensors.

Evans, Amanda [57] see Costa, August

Evans, Madeleine [282] see Betzenhauser, Alleen

Evans, Michael [294] see Rathgaber, Michelle

Evans, Skyler and Ruby Bleskacek (Barnard College)
[84]

Forest Regrowth and the End of Upland Farming at Picuris: Evidence from Tree Rings

Kilometers of terraced rock alignments characterize the upland slopes of the Picuris Pueblo watershed, capturing rainfall runoff in a water-efficient method of irrigation to combat the aridity of the Southwest. The terraces' effective use of runoff rainfall and space supported the Pueblo's population growth and Plains-Pueblo trade during the fourteenth and fifteenth centuries. After agricultural production in the upland slopes ended, the terraces have supported the growth of dense juniper, pinon, and ponderosa forests. Through dendrochronological analysis of tree ring samples taken in the regrowth forests of the Picuris agricultural fields, we are studying the historical and climate impacts of the field systems. The end-date of upland farming, whether aligned with climate crisis or historical event, will shed light on the changing agricultural practices of Picuris Pueblo. Furthermore, climate and streamflow reconstructions using the tree-ring samples will quantify the positive impact of Picuris land management on the preservation and health of forests in an arid climate.

Evans, Tomos (College of William and Mary; Dumbarton Oaks)
[325]

Doctrines of Discard in the Ịjẹ̀bù Kingdom: Social Stratigraphies of Refuse Mound Deposition in Southern Nigeria, AD 1400–1900

The Ịjẹ̀bù Kingdom (southern Nigeria) was for centuries involved in far-reaching trade networks—with the inland and coastal Yorùbá ílú (city-states), European merchants from various nations, and eventually the British Lagos Colony following its establishment in 1862. During this period, the Ịjẹ̀bù cultivated a reputation for insularity and isolationism, implementing policies restricting entry to the kingdom which relegated foreign merchants to hinterland market towns. Those entering the polity followed roads that were tightly regulated by tollgates and associated shrines to specific òrìṣà (deities), around which prosperous settlements would develop. This paper discusses archaeological research conducted at one such Ịjẹ̀bù tollgate village—Eredo (Lagos State)—that lay on an important trade road running from the coast to the Ịjẹ̀bù capital; and behind the 100-mile-long earthwork of Sungbo's Eredo. Through analysis of the stratigraphy of large discard mounds, it explores what the archaeological record informs us about Ịjẹ̀bù philosophies pertaining to accumulation, prestige, and ancestral continuity, and how these were materialized through practices of discard deposition. Moving away from ethnocentric understandings of discard as worthless refuse, it especially considers the relationships between discard amalgamation, land rights, ancestral power, and prosperity underpinning Ịjẹ̀bù society from the fifteenth to nineteenth centuries.

Extract, Jonathan (University of California, Riverside)
[252]

Legacies of the Códice de Cholula: An Ethnoarchaeology of the Valley of Puebla's Indigenous Landscape

Ethnoarchaeology is a critical methodology for analyzing prehispanic and early colonial codices. Drawing on the foundational work of John Pohl and Bruce Byland's *In the Realm of 8 Deer*, I discuss how ethnography can help decipher, contextualize, and bring to life Indigenous pictographic documents. My ethnoarchaeological fieldwork in Puebla, Mexico, has produced new insights into the sixteenth-century Códice de Cholula. Through interviews and participation in pilgrimages, I have located previously obscure locations, as well as elucidated the layout and cultural importance of the mountains, ravines, caves, and boundaries of the kingdom of Cholula. Importantly, ethnoarchaeology provides information on the continuity of Indigenous culture, such as the persisting social ties that pueblós still have to Cholula throughout the region. In

particular, the mountains mentioned on the Códice de Cholula remain crucial monuments for constructing ethnic identity and affiliation. I focus on two prominent hills, Ehecatepetl of San Jerónimo Caleras and Cerro Montero of San Antonio Mihaucán. These hills have been the sites of Indigenous agendas to assert their autonomy in the face of expropriation and privatization. Through ethnoarchaeology, I present a panoramic of the Cholultecan landscape as a space of resistance and resilience.

Eyeington, Ashley (Texas State University, SWCA Environmental)

[332]

Geoarchaeological Approach to Resolving the Origins of Bison Bone Beds at Bonfire Shelter, 41VV218, Val Verde County, Texas

Bonfire Shelter is a large prehistoric rockshelter site situated at the northern end of Mile Canyon in southwest Texas. Early investigators determined the site to be the location of multiple bison jump events; however subsequent investigations have disputed this interpretation. My research focuses on answering the questions of whether the Paleoindian bone bed represents a bison jump event and if so, does it represent one or multiple events. Geoarchaeological methods including particle size analysis, magnetic susceptibility, and loss-on-ignition are providing insights in the formation processes of the site and as a result, insights into the origin and number of events represented within the Paleoindian bison bone bed. To date, research of this type has not been conducted to analyze the Paleoindian bone bed at Bonfire Shelter. This presentation will provide the completed results of my thesis research as well as the final interpretations of Bone Bed 2 at Bonfire Shelter.

Faber, Sarah, Kristine Richter (Harvard University), Aurora Allshouse (Harvard University), Sonia Gabriel (Laboratório de Arqueociências, Lisbon, Portugal) and Christina Warinner (Harvard University)

[268]

Using ZooMS to Understand Hunting and Fishing in the Roman Mediterranean

Large-scale fishing of small fish in the Scombrid and Clupeid families as well as hunting of tunas was part of the economy in the Roman empire through the production of fermented fish sauces (including garum), pastes, and other fish products. These products were produced in various grades at large factories on the Mediterranean and exported throughout the Roman empire with the best garum fetching high prices. Much information is known on fish sauce production and use through texts and cookbooks including the commonly used fishes. In addition, the remains of garum factories and amphorae containing fish remains provide evidence of production and trade. While morphology can provide some information about species, the fermentation process often digests the bones creating morphological ambiguity which is complicated because most element of some species (such as the tunas) are morphologically indistinguishable. We developed markers for zooarchaeology by mass spectrometry (ZooMS) that distinguish to species level the most commonly used Mediterranean species in the Scombrid and Clupeid families and then used them to determine the species exploited at different fish processing plants in Iberia including both small whole fish used in garum and larger species of tuna identified at the garum production sites.

Fabian, Lara [42] see Fiore, Matthew

Fabian, Lara [284] see Johnson, Kimberly

Fábregas Valcarce, Ramón (University of Santiago de Compostela, Spain)

[162]

Chair

Fábregas Valcarce, Ramón [162] see Mosquera Castro, Tania

Fábregas Valcarce, Ramón [162] see Rodriguez-Rellan, Carlos

Fachard, Sylvian (University of Lausanne)**[26]***Territorial and Border Surveillance in the Greek World*

The Greek world formed a giant mosaic of city-states and leagues stretching over the entire Mediterranean and delimited by political borders. Like today, crossing a border was not innocuous, as states imposed their rule of law and enforced strict surveillance over their territories. This paper examines archaeological and textual evidence to argue that three forms of surveillance were commonly found in the Classical Greek world (fifth–third centuries BCE). First, a form of “natural surveillance” was innate to the occupation of the countryside, endorsed by social groups and citizen militia that lived in a continuous network of secondary settlements found in the territories of Greek city-states. Second, “institutional surveillance” was implemented by state personnel, as scouts, forest rangers, watchmen, and mountain and border patrols were regularly set up to watch the borderlands. The third form of surveillance, more infrastructural and military in nature, sees wealthier states increasingly investing energy and resources to support large-scale surveillance strategies by building towers, forts, fortresses, signal stations, linear barriers, and roads. These forms of surveillance, which operate jointly or separately at different levels, attest to the importance of territorial security and protection for the Greek city-states.

Fackler, Chlöe [332] see Hanselka, Kevin

Fahey, B. Patrick [306] see Murray, John

Faillace, Katie [334] see O’Brien Butler, Ciara

Fairbairn, Andrew (University of Queensland), Glenn Summerhayes (University of Otago), Matthew Leavesley (University of Papua New Guinea) and Sue O’Connor (Australian National University)**[217]***From the Mountains to the Sea: A Deep-Time Perspective on the Heritage of Foods in Papua New Guinea*

Papua New Guinea’s (PNG) geography ranges from the high alpine mountains of its Highland provinces to remote oceanic islands and is home to a diverse spectrum of subsistence practices, most notably intensive tuber-focused horticulture, but also arboriculture and polycultures featuring many endemic species. Archaeobotany is starting to disentangle PNG’s unique deep-time food history with evidence from 50,000 years ago demonstrating a combination of adaptation to the archipelago’s unique biota with the introduction of new crops and local innovation. That innovation continues today as PNG looks to monetize its endemic crops through commercial production and export, including the galip nut (*Canarium indicum*), which has an at least 20,000-year history of exploitation. Focusing on the often-overlooked tree crops, this paper reviews the archaeobotanical knowledge of the Highland karuka (*Pandanus julianettii*) and lowland galip (*Canarium indicum*), demonstrating marked discontinuities and continuities in their exploitation from the Pleistocene to present. Considering previously unpublished data and the experiences of applying standard macrofossil techniques to PNG’s varied archaeology, some pointers for future practice are also provided.

Fairbairn, Andrew [217] see Florin, S. Anna

Fairbairn, Andrew [256] see Harding, Makayla

Fairbairn, Cannon (University of Birmingham)**[115]***Relationships and Connections through Breast Milk: An Examination of Ancient Egyptian Perspectives on Breastfeeding*

To understand the usage of breastfeeding in ancient Egyptian art and ritual it is necessary to examine and

explore the ancient perspectives and beliefs which contextualized their creation. This includes the role of breastfeeding in a child's upbringing and growth as well as the relationship between a child and its nurse (whether mother or wet-nurse) with my interest being focused especially on the latter. This paper examines the role of breastfeeding and breastfeeders in ancient Egyptian society and how an understanding of everyday breastfeeding influences our understanding of its usage in ritual and political settings, or "high-status" settings. I will also examine what may be learned regarding everyday breastfeeding from images of nursing goddesses. As a common aspect of motherhood, the topic of breastfeeding offers a means by which to examine the way mothers were understood by their societies and the ways mothers may have understood their own roles. The usage of breastfeeding's image in society also offers an opportunity to examine the influence of motherhood on ritual, political, and social practices and beliefs.

Fairley, Helen (US Geological Survey), Joel Sankey (US Geological Survey) and Joshua Caster (US Geological Survey)

[283]

Assessing Predictability of Dam Effects at Archaeological Sites Using Long-Term Repeat Lidar Surveys

Repeat lidar surveys conducted over multiple years are a means of monitoring physical changes at archaeological sites with methods that are objective, replicable, accurate, and relatively low impact. These monitoring data can also be useful for testing assumptions about how archaeological site condition may change in response to changes in upstream dam operations and consequent alterations in the downstream environment. Using topographic change data collected with terrestrial lidar over the past decade at 29 sites along the Colorado River in Grand Canyon, Arizona, we assessed predictability of a conceptual model in terms of whether sites are likely to aggrade or degrade in response to ongoing operation of Glen Canyon Dam located upstream from the study area. Initial analysis of the lidar-based monitoring data demonstrates that effects of dam operations on archaeological sites are generally predictable when geomorphic setting, local sediment supply, weather conditions, and dam-induced riparian vegetation expansion are considered. While we developed the conceptual model and monitoring methods as a means of assessing dam effects on downstream archaeological sites, the approach is broadly transferable to other contexts and for other research purposes, such as assessing influences of a changing climate on cultural resources.

Faith, Tyler [249] see Cole, Kasey

Fajta, Martin [91] see Vargha, Maria

Falcucci, Armando (University of Tübingen) and Adriana Moroni (University of Siena)

[126]

Expedient Technological Behavior in the Aurignacian of Southern Italy

The role of expedient behaviors in the Upper Paleolithic has often been overshadowed by the study of more elaborate technologies to produce bladelets. This disparity in research focus is particularly evident in the Aurignacian context. Little discussion exists surrounding the use of cost-effective methods to produce stone tools with nonstandardized characteristics from low-quality raw materials. However, archaeological and ethnographic data indicate that expedient technologies are frequent throughout human history, with changes in their significance often linked to the higher focus of archaeologists on high-cost technologies. This presentation aims to illuminate the significance of expedient technological behavior in the southern Italian Aurignacian, which emerged around 41,000 years ago, replacing the Uluzzian. The latter is often associated with minimal technological investment in stone tool production, mostly relying on bipolar knapping to produce a limited range of formal tools. However, bipolar technology remains well-attested in the southern Italian Aurignacian. During this presentation, we will thus explore questions such as, to what extent is bipolar technology associated with expedient behavior? How does the availability and quality of raw materials influence this context? Is there a correlation between reduction intensity and core

technological investment? Are there commonalities in expedient technologies throughout the early Upper Paleolithic?

Fallon, Andy [92] see Leslie, David

Fallu, Daniel (Tromsø University Museum)

[113]

Chair

Fallu, Daniel (Tromsø University Museum), Andreas Lang (Paris Lodron University Salzburg), Leonidas Vokotopoulos (Minoan Roads Project), Florence Gaignerot-Driessen (University of Cincinnati) and Antony Brown (Tromsø University Museum)

[113]

Climate, Vulcanism, and Agricultural Terrace Construction in Late Bronze Age Crete

Environmental change during the Bronze Age (3000–1100 BC) on Crete had a strong impact on the viability of agriculture and subsequent development of land-management technologies. In particular the development of terraced agricultural systems increased the capacity of slope agriculture, allowing cultivation to keep pace with population growth. In particular, the 4.2 ky climate event (2200 BC) and the volcanic eruption of the island of Thera (mid-sixteenth century BC) appear to have resulted in flooding and soil loss which would have been a challenge to cultivation. This paper presents results from geoarchaeological and geochronological research at two Bronze Age terrace sites in eastern Crete, Anavlochos and Choiromandres. Portable X-ray fluorescence (pXRF), portable optically stimulated luminescence (pOSL), and archaeological thin section micromorphology were integrated to reconstruct the history of land use and soil loss at the sites. Results confirm the use of terraces for agriculture in the Bronze and Iron Age and suggest that increased erosion affected slopes in Crete ca. 4.2 ky (2200 BC) and 3.6 ky (1600 BC). The causes for these erosive events, such as the eruption of Thera, are discussed, as well as the motivations for terrace construction in the Aegean during this period.

Fallu, Daniel [113] see Brown, Antony

Farace, Anthony (University of Florida), Neill Wallis (Florida Museum of Natural History), Michelle LeFebvre (Florida Museum of Natural History), Charles Cobb (Florida Museum of Natural History) and Victor Thompson (University of Georgia)

[287]

A Geochemical and Petrographic Analysis of Ceramics from the Estero Island Site in SW Florida

The Estero Island site (8LL4) is located on a shell ridge in what is now Fort Myers Beach in southwestern Florida. A portion of the site, Mound House, consists of a historic house built on top of a Calusa shell mound that was occupied from ca. AD 500–1000. Conservation efforts at Mound House to preserve exposed Calusa archaeological deposits led to the excavation of five 1 × 1 units previously used as educational exhibits. This presentation reports an exploratory analysis of ceramics from one of the five units at Mound House to establish geochemical (LA-ICP-MS) and petrographic composition. Previous work at the site has discussed the importance of future work to help link the local communities at Estero to the broader Calusa kingdom and other indigenous cultures of southwest Florida. This analysis provides ceramic compositional signatures that can be used to compare to local and regional potting communities of practice and infer interaction through the movement of people, clays and/or ceramics. The project also adds significantly to the limited corpus of pottery compositional data in the south Florida region.

Farah, Kirby (Gettysburg College)**[10]***Discussant*

Farahani, Alan [85] see Lau, Hannah

Fargher, Lane (PAST Foundation / Ohio State University) and Robert Cook (Ohio State University)**[248]***Decolonizing the Concept of Urbanism: Early Formative Mesoamerica and Native North America in Comparative Perspective*

The colonialist academic project has long obliterated complexity in the precontact Americas. From the nineteenth to the mid-twentieth century, the complexity of Mesoamerican societies was erased; for example, the massive cities encountered by Cortés were deconstructed as simple villages/towns inhabited by tribes. Not until the second half of the twentieth century did Western scholars venture to argue that cities existed prior to Spanish colonialization. More recently, scholars have come to accept prehispanic urbanism in the Andes. However, most colonialist academics continue to expunge the urban history of Native North America. Accordingly, we use a comparative perspective to dive into the emergence of urbanism in Mesoamerica during the Early-Middle Formative as a backdrop for exploring settlement complexity in Mississippian, Fort Ancient, and Puebloan sites in North America. The goal of this work is twofold: to expand scholar understanding of non-Western urbanism and, thereby, challenge the colonialist project.

Fargher, Lane [320] see Antorcha Pedemonte, Ricardo

Farmer, Andrea (US Army Corps of Engineers, Savannah District)**[4]***Unexpected Discoveries and Partnerships: A Revolutionary War Discovery in Coastal Georgia*

In 1779, several British vessels were scuttled in the Savannah River, successfully stopping the advance of the French fleet off the coast of Georgia. The Savannah Harbor Expansion Project, the largest Civil Works project in the US Army Corps of Engineers, Savannah District's history, provided a unique opportunity to investigate this incident in the city's submerged history. Between 2021 and 2022, 19 cannon were retrieved from the Cannon Cluster Site (9CH1552), which allowed for the development of new partnerships and outreach opportunities. This paper will focus on the results of the underwater remote sensing surveys, diver investigations, recovery efforts, and conservation measures to better understand this unexpected discovery and Savannah's maritime history.

Farmer, Reid**[94]***Chair***Farmer, Reid, Jon Kent (Cherokee Ranch Science Institute), Caitlin Calvert and Kayla Bellipanni****[94]***Archaeological Excavation and Survey at Cherokee Ranch, Douglas County, Colorado*

In cooperation with the Cherokee Ranch and Castle Foundation, Metropolitan State University–Denver has conducted excavation and survey on the Foundation's property near Sedalia, CO, since 2014. Excavations have taken place at the Cherokee Mountain Rock Shelter (5DA1001) that was previously partly excavated in the 1970s. Artifacts and radiocarbon assays indicate a seasonal occupation primarily during Late Prehistoric period, though recent work indicates probable Archaic components. Survey has covered circa 780 acres with

recording of 31 prehistoric sites and 74 isolated finds. Three of these show intensive use: another rockshelter, a lithic quarry, and a large occupation site. The remainder appears to represent frequent but short term occupations for various resource extraction activities. They show occupations dating from 7500 BP to the Protohistoric. Lithic materials and ceramic types show inhabitants had trading/cultural ties with groups up to hundreds of miles away. All together these data paint a portrait of prehistoric use of this area of the Colorado Piedmont throughout the Holocene.

Farnsworth, Shannon [192] see Mallios, Seth

Farquhar, Jennifer (University of Pittsburgh), Arlene Rosen (University of Texas, Austin), Sarantuya Dalantai (Mongolian Ministry of Science and Culture) and Tserendagva Yadmaa (Mongolian Ministry of Science and Culture)

[130]

Wetlands and Grasslands: Habitat Choice of Hunters and Herders across the Transition to Mobile Pastoralism in Mongolia's Desert-Steppe

Paleoclimate studies across northeast Asia document a pronounced drying and cooling trend across desert and desert-steppe environments around 6,000 years ago, intensifying between 4500 and 4000 BP. While conditions led to the deterioration of lake and wetland habitats, past archaeological research based on museum collections and a limited number of excavated sites suggests that Neolithic (ca. 8000–5500 BP) foraging communities intensified use of remaining wetland environments through high residential mobility, a trend that continued into the Bronze Age as herding practices were first introduced (ca. 4500 BP). The continuation of wetland focused settlement strategies during the early stages of pastoralism is thought to signal the gradual, in situ development of herding, however, recent multiscale research in Mongolia's desert-steppe has identified subtle shifts in mobility and land use that signal a more abrupt change in habitat choice, including prioritization of upland grasslands and productive winter vegetation at the expense of lowland wetlands. We propose that the resulting population consolidation increased levels of unpredictability as people vied for scarce resources and contended with increasing rates of social interaction, patterns that fostered adaptations that came to define Eurasian mobile pastoralism including high residential mobility, long distance connections, and social differentiation.

Farquhar, Jennifer [23] see Rosen, Arlene

Farquharson, Kyle [78] see Longstaffe, Matthew

Farrell, Aubrey (Booz Allen Hamilton)

[259]

Shark Teeth Research Opportunities Broadened by Innovations in Materials Science

The study of sharks in the archaeological record provides plentiful research opportunities within the lenses of social zooarchaeology and materials science. The convergence of these two themes when analyzing artifact shark teeth presents unique advantages and challenges to understanding how past people perceived sharks and made use of their physical remains. Advanced methods in materials science (scanning electron microscopy and X-ray diffraction) as well as potential avenues for future investigations are outlined by summarizing an analysis of 107 shark teeth from 16 archaeological sites across Florida.

Farrell, Ian (Natural History Museum of Utah, University of Utah), Shannon Boomgarden (Natural History Museum of Utah, University of Utah) and Jenna Foster (Natural History Museum of Utah, University of Utah)

[294]

Experimental Granary Construction in Range Creek Canyon, Utah

Food storage is a key component of many human subsistence patterns and has been a topic of interest for decades. In arid environments, agricultural surplus can be critical to survival. Having stored surplus available when needed is a benefit likely well worth the costs. In Range Creek Canyon (RCC), prehistoric maize farmers appear to have invested considerable effort into creating secure food storage facilities in the form of aboveground granaries and semi-subterranean cists. There is, however, significant variation in how these facilities were constructed and where they are located. Experimental reconstructions will help explain this variation by providing estimates of construction costs associated with different types of granaries, as well as any differential benefits conferred by those methods of construction. Students at the Range Creek Archaeological Field School participate in this experiment by building their own experimental reconstructions and recording their time costs. Students are free to experiment with different techniques and are not micromanaged to make every granary identical. This contributes to their learning and formation of potential research questions and refines the experiment with new information. Additionally, students gain skills that help them in recording similar features that they see at the field station or in later careers.

Farrell, Ian [294] see Boomgarden, Shannon

Farrell, Ian [294] see Foster, Jenna

Faulkner, Patrick (University of Sydney) and Akshay Sarathi (Texas A&M University)

[18]

Shellfish Perspectives: Marine Resource Exploitation and Maritimism in Zanzibar

The Zanzibar Archipelago experienced dramatic socioeconomic and socioecological changes over the last 2,000 years in line with the rest of the Swahili Coast. The onset of Iron Age transformations linked to foraging and farming economies, connections via the broader Indian Ocean trade network, through the colonial period and into the present day, together mark significant shifts in the way that people have engaged with the coast and marine resources. Although under debate, investigations of occupation and economic social structures throughout this period have also led to discussions about the timing and nature of “maritimism” in the region. The sea and its resources have been, and continue to be, of high importance to the people of the Zanzibar Archipelago, with an increasing body of socioecological literature emphasizing the economic, ecological, and social factors that drive the nature of fishing and shellfish foraging through time and space. Here, I explore how the exploitation of marine resources—especially shellfish—serves as evidence of maritime worldviews, requiring intense knowledge of maritime landscapes and what they offer. Using ethnographic and archaeological evidence, I show that significant engagement with the ocean began fairly early in the occupation sequence of Zanzibar and continues to the present.

Faulseit, Ronald (Los Angeles Pierce College)

[210]

The Storied Landscape of Macuilxóchtli

During archaeological excavations I directed on the lands of San Mateo Macuilxóchtli in Oaxaca, Mexico, members of the community shared several narratives with me about the mountains surrounding their village. These stories intertwined myth and history to convey the special connection between the people and place. In this paper, I will discuss how these narratives serve as a theoretical basis for understanding archaeological features that we surveyed and excavated.

Fauvelle, Mikael (Lund University)

[298]

Chair

Fauvelle, Mikael (Lund University)

[298]

How to Avoid Getting Stuck: Hierarchy, Heterarchy, and Anarchy in Southern California

Precolonial California was home to some of the highest degrees of linguistic and cultural diversity seen in human history. This rich variability provides an excellent example for scholars to compare historical trajectories to understand how different societies developed along different political and economic pathways. In *The Dawn of Everything*, Graeber and Wengrow compare between highly dissimilar political strategies employed in the Pacific Northwest and northern California, suggesting that some of the differences between these regions can be explained through the concept of schismogenesis. In this paper I extend this analysis to southern California. I will argue that different coastal and interior regions, while maintaining intense contact between each other, chose very divergent political pathways. While some developed hierarchical and pyramidal political structures, others chose much more heterarchical and anarchic pathways. In this paper I explore how insights from the Graeber and Wengrow's provocative contribution can help us understand the different political and economic choices made by different ancient societies in southern California.

Faux-Campbell, Jennifer (Palo Verde College)

[184]

Trials and Tribulations: Navigating Instruction of Archaeology Courses for Rising Scholars in a Post-pandemic Educational Environment

On October 6, 2021, California's Governor Newsom signed in law AB 417 - Rising Scholars Network: Justice-Involved Students. The purpose of this bill was to expand higher educational opportunities for and reduce equity gaps among Rising Scholars (students who have formerly experienced incarceration or are currently incarcerated). At Palo Verde College, where 12–15 anthropology courses are offered to Rising Scholars students each semester, the need for ensuring Rising Scholars students are provided with a robust educational experience is crucial. Yet, given the obstacles confronted by Rising Scholars students, anthropology instructors have struggled to provide Rising Scholars with a robust archaeological curriculum. These obstacles include, but are not limited to, the following: slow-moving correspondence with students, students' limited access to the internet, difficulty in accessing library tools, and students' limitations related to on-campus resources. In this paper, I will examine the challenges confronted by anthropology instructors who teach Rising Scholars students in an effort to explore the skills needed to successfully apply effective archaeological pedagogy to correspondence-based archaeology courses.

Favila Vázquez, Mariana (CIESAS-CDMX)

[158]

Reconstrucción de rutas acuáticas en Nueva España a través del análisis geográfico de textos

En esta ponencia se presentará la metodología refinada del análisis geográfico de textos que permite relacionar nociones espaciales concretas con expresiones lingüísticas con distintos niveles de precisión. En particular, me concentraré en el problema de las rutas acuáticas que aparecen dispersas en numerosas fuentes escritas del virreinato. Para esto presentaré una sistematización metodológica que pretende facilitar la extracción de la información que a su vez permitirá la reconstrucción de rutas acuáticas en las que tecnologías de navegación locales indígenas permitieron el movimiento en distintos cuerpos de agua. Estas rutas acuáticas son integradas a un SIG histórico que a su vez se compara con los resultados de un modelo de análisis espacial que permite detectar el potencial de navegabilidad de los cuerpos de agua en tierra firme.

Fazioli, K. Patrick (Mercy College)

[91]

Chair

Febryanto [288] see Dilkes-Hall, India Ella

Fedick, Scott (University of California, Riverside), Anabel Ford (University of California, Santa Barbara), Jorge Mendoza-Vega (El Colegio de la Frontera Sur, Unidad Campeche), Víctor Ku Quej (El Colegio de la Frontera Sur, Unidad Campeche) and Narciso Torres (Exploring Solutions Past: The Maya Forest Alliance)

[202]

Ancient Maya Agriculture: The Intersection of Archaeology, Soil Science, Ethnobotany, and Traditional Ecological Knowledge

One enduring mystery of the ancient Maya is how they managed to feed large populations in a tropical environment and land resources that have long been characterized as hostile and challenging for agriculture. The traditional academic and popular perception of Maya agriculture, both ancient and modern, was based on the cultivation of maize, beans, and squash, using a land-extensive slash-and-burn cultivation system across a relatively uniform landscape. In this study we model the suitability of varied land resources for a variety of crops beyond the maize-beans-squash trilogy. We are developing a model of how the ancient Maya may have tailored their cultivation practices to match a variety of food plants to the most suitable soils for particular species. Our study area is El Pilar Bi-national Park which straddles the Belize-Guatemala border and surrounds the ancient Maya civic-ceremonial center of El Pilar. Lidar imagery and full ground truthing has been used to map all ancient settlement within the park. Soils have also been mapped at a scale of 1:10,000. We critically evaluate the application of the FAO suitability classification for specific crops, while comparing the results to crop suitability evaluated by Maya master gardeners well versed with traditional ecological knowledge.

Fedoroff, Michael (University of Alabama)

[179]

Rekindling Ancestral Choctaw Cuisine: A Collaborative Application of Archaeology for Community Consumption

The Pine Hills of Mississippi is an understudied research area in archaeology with even less work done in collaboration with Indigenous descendant communities (both resident and removed). The current project was undertaken in collaboration with the Choctaw Nation of Oklahoma to better understand earth-oven technology in the archaeological record of their homeland with the goal of rekindling cooking techniques and traditions for their community. The approach presented here incorporates information from the tribe, both past and present, including oral traditions, ethnohistorical documents, and place-names. From an archaeological perspective, clay sandstone features that may represent cooking facilities, associated artifact assemblages, and lithic debris from a representative archaeological site in the ancestral Southern District will be examined through the lens of Choctaw culture. In developing this type of research collaboration, the theme of decolonization and Indigenous ontologies emerged, which adds value to the methods, analysis, and broader impacts of the work itself for both archaeologists and descendant communities. Specifically, this project demonstrates the application of Community-Based Participatory Research (CBPR) principles in archaeology can inform cultural revitalization of a living people.

Fehren-Schmitz, Lars [233] see Kassadjikova, Kalina

Fehren-Schmitz, Lars [81] see Nesbitt, Jason

Fehren-Schmitz, Lars [70] see Schmidt, Zoë

Fehren-Schmitz, Lars [221] see Verdugo, Cristina

Feinman, Gary (Field Museum of Natural History)

[56]

Discussant

Feinman, Gary [86] see Golitko, Mark

Feinman, Gary [50] see Guevara-Duque, Maria Isabel

Feit, Rachel [189] see Boudreaux, Sarah

Feldstein, Ahna (Boston University)

[215]

Untangling the Ecological Impacts of Equestrianism: An Integrated Isotopic and Archaeobotanical Analysis

[WITHDRAWN]

Feltz, William [105] see Hills, Kendall

Feng, Jennifer (University of Pennsylvania), Shu Kong (Texas A&M University), Timme Donders (Utrecht University) and Surangi Punyasena (University of Illinois, Urbana-Champaign)

[288]

Deep Learning and Pollen Detection in the Open World

Pollen-based paleoecological reconstructions rely on visual identifications that can be automated using computer vision. To date, most automated approaches have focused on taxonomic classification of pollen in cropped images. There are fewer protocols for pollen detection (i.e., localization) in whole-slide images. New samples potentially introduce rare and novel taxa, making pollen detection in the open world—a world where we constantly encounter new diversity—challenging. We explored pollen detection in the open world by focusing on three significant challenges. We first addressed taxonomic bias—missed detections of smaller, rarer pollen types. We fused an expert model trained on this minority class with our general pollen detector. We next addressed domain gaps—differences in image magnification and resolution across microscopes—by fine-tuning our detector on images from a new imaging domain. Lastly, we developed continual learning workflows that integrated expert feedback and allowed detectors to improve over time. Effective pollen detectors enable higher and more reproducible pollen counts that could improve the accuracy of diversity estimates and accelerate the creation of long-term, high-resolution paleoecological records. Our methods can be applied to other visually diverse biological data, including algae, fungal spores, and phytoliths.

Feng, Jennifer [288] see McKenna, Moriah

Feng, Jennifer [12] see White, Chantel

Fenn, Malachi [229] see Ayers-Rigsby, Sara

Fenn, Thomas (University of Oklahoma)

[121]

Glass Provenance Studies Using Isotopes and the Nuances of Geological Inputs and Influences

Advances in both analytical techniques used to examine archaeological materials and in our understanding of various isotope systems have led to an efflorescence of research that applies isotopic analyses to questions of provenance in ancient glass materials. While initial isotopic studies of ancient glasses began with lead isotope work by Robert Brill and colleagues (late 1960s), advances in precision and accuracy, and, more importantly, the sensitivity of more recent instrumentation have opened new isotopic systems for exploration. This led to the use of the strontium (early 2000s) and neodymium (later 2000s) systems, which was followed by extensive exploration of the applicability of other isotope systems, such as antimony, boron, copper, and more, leading to many new and exciting provenance interpretations. Work with these isotope systems also has led to large-scale characterization of raw material resources used in ancient glass production. However, this growth in glass provenance studies using isotopic analyses comes with a growing concern over properly understanding the role and influence of natural (and human) processes that can significantly impact our abilities to interpret those results correctly. This paper outlines

recent issues, successes, and challenges in generating and interpreting radiogenic isotope data for provenance studies of ancient glass.

Fennelly, Katherine (University of Sheffield)

[147]

The Heritage Glossary Project

Heritage is a multidisciplinary field. Students of heritage come to the subject from a broad array of backgrounds, nationalities, and languages. The word heritage has many meanings depending on context and understanding the multiple meanings of the word itself is the first “translation” I task students with in the classroom when the semester begins. The Heritage Glossary Project grew out of this classroom exercise. The aim of the project is to produce a resource to support heritage education for students who do not have English as their first language, or who do not have a disciplinary background in heritage or archaeology. The project is UK-based. The first stage of the project has been to learn from student experience of heritage education and compile a glossary for their practical use, drawing on student feedback and engagement. This paper will account for the first stage of the project, and future steps toward developing inclusive resources for heritage education.

Fenner, Jack (Australian National University; University of Notre Dame), Mark Schurr (University of Notre Dame), Madeleine McLeester (Dartmouth University) and Laure Dussubieux (Field Museum of Natural History)

[60]

Combining Trade Good and Radiocarbon Dates across a Calibration Curve Inversion: Middle Grant Creek

Precise dating of archaeological sites created during the last millennium often benefit from chronological information provided by trade goods but may be hampered by inversions in the radiocarbon calibration curve. Middle Grant Creek is one such site. It is a protohistoric Native American site near present-day Chicago which has yielded a number of European trade goods and for which a series of radiocarbon dates span a large calibration inversion. We created a series of OxCal models that start with the radiocarbon data and progressively incorporate stratigraphic and trade good chronological data. The results provide insight into how OxCal modeling responds as more information is added—particularly with respect to boundary conditions—as well as a better understanding of Middle Grant Creek’s chronology.

Ferar, Nolan (ICArEHB, University of Algarve, Faro, Portugal)

[126]

Chair

Ferar, Nolan (ICArEHB, University of Algarve, Faro, Portugal), Jonathan Haws (University of Louisville) and João Cascalheira (ICArEHB, University of Algarve, Faro, Portugal)

[126]

Raw Material Selection and Technological Expediency in the Iberian Middle-Upper Paleolithic Transition

Expediency, in the sense of applying low-cost, informal technological solutions, characterizes a great deal of hominin technological behavior over time. The degree to which expedient technological behaviors are culturally laden versus culturally void remains an open question—one with important implications for our interpretation of hominin evolution. In Iberia, for example, lithic assemblages are widely categorized as Mousterian if they (1) appear expedient in nature (especially if made on materials such as quartzite or quartz) and lack UP fossils directeurs, (2) have centripetal methods, and c) date to periods when it is known or assumed Neanderthals lived. However, such inferences become problematic when applied to Iberia’s Middle-Upper Paleolithic transition. Since the process and chronology of Neanderthals’ replacement by modern humans remain to be clarified, drawing links between technological expediency and Neanderthal authorship here risks confusing the conclusion for a premise. Toward informing this debate, this paper reviews the role of raw material selection on expedient lithic production during the Iberian MP. Data are presented from Lapa

do Picareiro layer FF—an expedient assemblage overlying early Aurignacian deposits—to illustrate the impact of raw materials, and how our own framing of technological expediency shapes interpretations of this key transitional period.

Ferguson, Jeffrey (University of Missouri), Sean Polun (University of Missouri), Francisco Gomez (University of Missouri), Robert Walker (University of Missouri) and Zachary Smith (University of Missouri)

[283]

Comparing Plane-Based and Drone-Based Lidar to Pedestrian Surveys in the American Southwest

Lidar surveys have revealed vast areas of ancient human settlement in parts of the world that are poorly known due to dense vegetative cover, but the use of lidar as a survey tool has not been fully explored in regions like the American Southwest that feature minimal vegetation and generally good surface visibility. Our research program in the Lion Mountain area of west-central New Mexico seeks, in part, to understand Pueblo period settlement over vast areas in the Gallinas Mountains, but pedestrian survey is slow and labor-intensive. UAV-based lidar shows great promise in both revealing previously unknown sites and illuminating details on known sites. We have implemented UAV-based lidar with large spatial coverage, and direct comparisons are now possible between full-coverage pedestrian survey, lower-resolution plane-based lidar, and higher-resolution UAV lidar. Direct comparison is also made between visual data inspection and trained deep learning models for site detection. While UAV-based lidar cannot fully replace pedestrian survey for compliance purposes, it can greatly enhance the identification of surface features and regional settlement patterns.

Ferguson, Jeffrey [33] see Burgess, Blaine

Ferguson, Jeffrey [255] see Davenport, James

Ferguson, Jeffrey [50] see Davis, Kaitlyn

Ferguson, Jeffrey [287] see Glaser, Vanessa

Ferguson, Jeffrey [335] see Turner, Michelle

Fernandes, Ricardo [212] see Socha, Dagmara

Fernández, Ana [185] see Makowski, Krzysztof

Fernández, Hannah [42] see Mayo, Carlos

Fernández-López-de-Pablo, Javier [308] see Barton, C. Michael

Fernandez López López, Maria [246] see Halperin, Christina

Fernández Mier, Margarita [310] see Aparicio, Patricia

Fernandez-Preston, Natasha (University of California, Berkeley)

[278]

Farming and Importing Food: Colonial Racial Capitalism and Food Sovereignty in the US Territory of Puerto Rico from 1919 to the Present

The purpose of this research is to trace food practices in the US territory of Puerto Rico for the last century (1919–2018) and relate them to the processes of colonial racial capitalism. Since the mid-twentieth century,

Puerto Rico went from being a mostly agricultural archipelago to an archipelago where there is barely any agriculture and that imports 85% of the food it consumes. This transformation was led by the development strategies that were initiated in 1947, under the political banner of bringing a better quality of life to the archipelago. However, there is a lack of specific knowledge of how agriculture was abandoned, and political narratives tend to put the blame on individuals who did not want to continue farming. Thus, here I will use archival data to explore food practice changes and how they relate to political and economic decision-making. I will use agricultural censuses to trace farming and landscape changes within Puerto Rico throughout time, and I will then visualize these changes in GIS maps. Moreover, I will look at importation and exportation records to graph food importation changes throughout time. Lastly, I will suggest possible avenues for change and the growing food sovereignty movement in the archipelago.

Fernández Souza, Lilia [83] see Novelo Pérez, María J.

Fernandini, Francesca (Pontificia Universidad Católica del Perú)

[243]

Chair

Fernandini, Francesca (Pontificia Universidad Católica del Perú)

[243]

Haciendo camino al andar: Hacia una arqueología colaborativa en Cañete (Cañete)

El sitio arqueológico Cerro de Oro (Cañete), al igual que miles de sitios en Perú, fue considerado por la comunidad que lo rodea como un espacio abandonado. Fue huaqueado, usado como vivienda, espacio agrícola, y sus paredes y restos afectados por diferentes tipos de actividades. En el 2012, el Proyecto Arqueológico Cerro de Oro inicia como un pequeño proyecto de investigación. A lo largo de los años, y luego de interactuar con los vecinos que viven sobre el sitio, con gobiernos distritales, provinciales y regionales, colectivos culturales, instituciones educativas, etc.; el enfoque del proyecto ha cambiado hacia una propuesta de arqueología colaborativa. Esta propuesta ha ido creciendo de manera orgánica a través de distintas iniciativas que nos han llevado a trabajar de la mano de la universidad local, de los colegios nacionales, colectivos culturales y en particular con los vecinos que viven sobre el sitio. Esta ponencia presentará los retos de establecer y mantener una iniciativa de arqueología sostenible con un enfoque colaborativo y voluntario.

Ferrar, Nolan [126] see Sánchez-Martínez, Javier

Ferrara, Scott (City University of New York)

[44]

More than a "Bones Player": Community-Led Reinterpretation of the Brewster-Mount Site in Setauket, New York

The Brewster-Mount home (ca. 1800) was razed in the 1960s and excavated in 1982. An extensive assemblage of artifacts was recovered that ranged from construction materials, domestic ware, faunal remains, and more personal items. Recently, a new public history has highlighted the plurality of this home's history as a site of African enslavement and labor exploitation. Notably, nineteenth-century genre and landscape artist William Sidney Mount had not only painted the homestead, but three of the Black residents of this home who sat for portraits were notably depicted in Mount's *The Bones Player*. Of these, Andrew Brewster and another resident were enslaved. This rare occurrence allows us to see the artistic interpretation of what the occupants looked like. However, their likeness (through art) is still framed within the "White male gaze" of their painter, Mount. Recently, descendants of the enslaved occupants of the Brewster-Mount home have partnered with the Three Village Historical Society to reinterpret and exhibit this assemblage, exploring themes of identity, race, and agency. This poster will highlight the reinterpretation of this site and recent developments for this project.

Ferras Deletré, Mélanie (Lettres Sorbonne Université)**[27]***The Offerings to the Ceremonial Center of Chavín de Huántar: New Perspectives from the Explanada Canals*

The ceremonial center of Chavín de Huántar (1200–500 BCE) stands out for its extensive network of hydraulic canals. The excavations carried out by the Chavín de Huántar Archaeological and Conservation Research Program in the Explanada sector allowed these subterranean structures to be investigated. Their excavations provide an important variety of data that covers both construction techniques and selections of materials and objects deposited. Indeed, the hydraulic functions of the canals not only had a wastewater role but also a ritual part, being part of the dynamics of material offerings to the ceremonial center. The analysis of the material registered during the excavations of the canals demonstrates a careful selection of the artifacts offered. This choice to select valuable pieces is particularly emphasized in the Explanada Canal 7, where a set of articulated bone pins was deposited.

Ferras, Jennifer [43] see Uldall, Tamara

Ferris, Neal (University of Western Ontario)**[331]***Fluid Persistence: The Heritage Matters and Watery Wellness of the Bath Spring and Stream, Nevis*

The volcanic waters of the Bath Spring on Nevis flow downstream and enter Gallows Bay in the Caribbean Sea, a fluid persistence that has shaped and been shaped by the differently lived archaeologies along its waterscape before and through local becomings of Western colonialism, imperialism, and capitalism. Their ascribed curative qualities have shaped the heritage of these waters to that of a shared tradition of health and wellness. Today this watery heritage continues to enmesh Nevisians and visitors alike who daily come to the hot springs to cure ailments, restore vitality, and participate in the social custom of bathing and being Nevisian. But these waters are also continually transforming, as differing vibrancies of this watery wellness are prioritized by distinct assemblages of colonizer, enslaved, emancipated, and disenfranchised Nevisians, foreigners and tourists, all contesting and remaking the why and what for of this place. How the Bath waters have been differently lived and understood reveals much about the fluid persistence to this heritage, especially given ongoing efforts by the St. Kitts Nevis government to articulate an Outstanding Universal Value for these waters as part of their effort in securing a World Heritage inscription.

Ferry, Hannah [203] see Cabral, Devyn

Fertelmes, Craig [88] see Garraty, Christopher

Fertelmes, Craig [281] see Phillips, Bruce

Ferwerda, Carolin [283] see Alperstein, Jonathan

Ferwerda, Carolin [84] see Casana, Jesse

Ficetola, Francesco [113] see Brown, Antony

Field, Julie [303] see Roos, Christopher

Field, Sean (University of Wyoming), Donna Glowacki (University of Notre Dame) and Kay Barnett (Mesa Verde National Park)

[286]

The Becoming of Far View House

More than a century ago, Jesse W. Fewkes excavated Far View House, a large mesa-top pueblo in Mesa Verde National Park. Despite a long history of research, interpretation, stabilization, and maintenance since its initial excavation in 1916, a complete construction history of Far View House has never been produced. New research at Far View, including architectural, tree-ring, and archival analysis, has enabled a detailed reconstruction of the formation and development of Far View House. These results illustrate a complex building history including at least five major phases of construction, which began sometime in the mid-to-late ninth century and possibly earlier, with a rectangular, single-story, 18-room pueblo. Over the next four centuries, Far View was transformed into a multi-story, 57-room pueblo with four enclosed kivas and a large, bisected plaza. This architectural reconstruction of Far View House illustrates the growing complexity of the building and the Far View community during the Chaco Era.

Figueiredo, Margarida [170] see Lewis, Brandon

Figueroa, Alejandro (University of Missouri), Whitney Goodwin (University of Missouri Research Reactor), Brigitte Kovacevich (University of Central Florida), Michael Callaghan (University of Central Florida) and Christopher Roos (Southern Methodist University)

[122]

Geochemical Soil Analysis of Sequential Public and Private Plaster Floor Surfaces from the Maya Site of Holtun

In this paper we present the results of an exploratory program aimed at providing multicomponent soil sampling and analysis of plaster floor surfaces at the Maya site of Holtun, Guatemala. Our research sampled three different plaza settings at the site: the monumental E-Group plaza, an elite residential patio adjacent to the E-Group monumental core, and an elite residential patio distant from the E-Group. Sequential floors within these open spaces spanned from the Middle Preclassic through the Late Classic periods. Our research identified the chemical signatures for activities related to food production and consumption in sequential plaza floors across all sampled contexts and suggests the locations of some of these activities changed over time. Importantly, our results suggest different activities took place in public as opposed to private spaces within the site, offering new avenues for future research in similar settings.

Figueroa Alcantar, Jesus

[284]

Our Ancestor's Hands Made These Ceramics: A Comparative Ceramic Analysis in the Coca-Nahua Community of Mezcala, Jalisco, Mexico

The Lago de Chapala region during the Postclassic period (900–1520 CE) was a borderland where the P'urhépecha Empire in Michoacán expanded into the territories of the smaller, but resistant Coca, Tecuexe, and Cazcan kingdoms, and nomadic Chichimeca groups in Jalisco, Mexico. Archaeologists from the United States excavated in this region from about 1950 to 1970, filling in gaps in the archaeological timeline, but left with more questions than answers. After a 50-year period of stagnant research in the region, my interest in learning more about my ancestors led me to work with the neighboring community of Mezcala, which is experiencing a resurgence in Coca identity reclamation and interest in its own cultural heritage. My master's thesis research aids these community interests by analyzing ceramics from the town and island of Mezcala and comparing them to ceramic assemblages from across Jalisco and Michoacán. My results point to strong regional similarities in the production of ollas and bowls, which I hypothesize indicates a shared regional identity separate from P'urhépecha influence. This project is an example of how Indigenous Archaeology is allowing local communities to reclaim, rediscover, and write their own history.

Figueroa Beltran, Carlos (San Diego State University)**[96]***The Peninsula of Baja California, a Terra Ignota Before and Now*

The colonization process in the Baja California Peninsula began with the arrival of Hernán Cortés in Bahía de la Santa Cruz in 1535. Then, the peninsula was called Terra Ignota, a Latin term used in cartography for regions that have not been mapped or documented. Its geographical isolation from the rest of New Spain made it a territory wrapped in fantasy and mystery for those first explorers and missionaries. Paradoxically, the peninsula remains Terra Ignota after almost 500 years of European contact. However, its geographical isolation has allowed it to be considered by many scientists as an archaeological, biological, and geological laboratory. The accelerated impact caused by the colonization led the native communities to their total extinction from the Los Cabos region to El Rosario, northwest of the peninsula, leaving only a handful of ethnohistorical records on their cultural and religious practices. For this reason, the Cochimi, who occupied almost half of the peninsular territory in its middle part, were a cultural group that we know little about but left abundant material records of their way of life, funerary practices, and religiosity. Here, we present the results of three archaeological expeditions in different geographic settings of the Cochimi Desert.

Finley, Judson (Utah State University), Erick Robinson (Native Environment Solutions LLC) and R. Justin DeRose (Utah State University)**[107]***Hydroclimatic Constraints on Population Growth in Dryland Foraging-Farming Communities*

Developing a unified theory of human population growth requires a multiscale perspective on the evolution of human social-ecological systems over space and time. This requires iteration between macro-level theory and microscale events captured in the archaeological record. This poster begins to develop theory for the microscale. It does so by focusing on the hydroclimatic constraints on population growth in dryland foraging-farming communities. We develop high-precision models for settlement persistence of Fremont communities on the northern Colorado Plateau and eastern Great Basin. These communities were some of the shortest-lived agricultural communities on earth. We integrate high-precision site-based models for community growth and decline with (1) an annual streamflow model derived from a 3,000-plus-year-old tree-ring record, and (2) high-precision alluvial geochronology models. We propose that the hydroclimatic contexts of these communities were too dynamic and sensitive to major disturbances to support settlement persistence over the long term. This lack of settlement persistence limited the knowledge transmission networks required for innovations to grow and ultimately sustain these populations.

Finley, Judson [219] see Robinson, Erick

Fiore, Matthew (Hamilton College), Hannah Lau (Hamilton College), Lara Fabian (University of California, Los Angeles), Jeyhun Eminli (Azerbaijan National Academy of Science [AMEA]) and Susannah Fishman**[42]***Examining Origins of Ceramic Production in Lerik, Azerbaijan (Late Iron Age to Late Antique Period): Insights from Ceramic Petrographic Analysis*

This research examines manufacturing technology and origin of production of ceramics from the necropolis at Piboz Tepe and site at Yoladoy Bin in the Lerik region of Azerbaijan through utilization of ceramic petrography and surface treatment analysis. Data obtained through petrography analysis indicates whether ceramics were locally produced or imported from elsewhere, in correlation with regional geological data. The research investigates choices made by dwellers in this highland region, whose mortuary assemblages suggest a relationship with their imperial neighbors—extending previous research to learn more about the role of these dwellers within the larger sociopolitical system. The data come from the Lerik Azerbaijan-America Project (LAAP), which considers living communities contemporaneous with the creators the necropolis at Piboz and its landscape to better understand local cultures and practices from the Late Iron Age to the Late Antique period (ca. 500 BCE–500 CE). The methodology provides a lens through which to center lesser-known contributions

to the success of dominant empires, based on proximity or other factors. Further analysis will help to reconstruct aspects of production, social organization, and exchange for the living population using data from mortuary contexts and provide a baseline against which to compare to other excavated contexts.

Firenzi, Alexandria

[200]

Refining Ideal Free Distribution Predictions Using Paleoenvironmental and Zooarchaeological Data on California's Northern Channel Islands

I examine the potential for using higher resolution environmental records to expand on existing ideal free distribution (IFD) model applications on California's Northern Channel Islands. In this project, I take advantage of recent advances in paleoenvironmental research and higher resolution proxy methods (e.g., sclerochronology) since previous applications and consider how IFD model applications within archaeology have been applied in the last decade. I then apply patterns in dietary diversity and settlement chronology in the context of multiproxy environmental data, which can be used to refine patterns in site suitability beyond what broader climate records in previous applications allowed. Informing climatic data is a synthesized set of proxy records (e.g., speleothem and coral records) using data archives sourced from Climate Data Online, PANGEA, and outside publications. Sclerochronology samples are sourced from two sites on Santa Rosa Island—namely, CA-SRI-19 and -138, two trans-Holocene dated sites. Faunal data is sourced and compiled from outside publications, supplementing CA-SRI-19 and -138. To ensure internal consistency of datasets for comparability, I review data for inconsistencies (e.g., nonunique primary identifiers) and differences in resolution (e.g., differing organization/ schema) prior to application within models. Results of this analysis provide important information about the continued calibration of IFD.

Fish, Paul (Arizona State Museum)

[75]

Discussant

Fish, Suzanne (University of Arizona)

[149]

Karen Adams: Scholar, Collaborator, and Friend

Karen Adams richly deserves recognition as a premier, foundational Southwest archaeobotanist, a status personally and professionally celebrated by the organizers of today's session in her honor and by her past term as President of the Society of Ethnobiology. Few other researchers in the field approach her qualifications, breadth of knowledge, experience, and pioneering scholarly accomplishments. She is remarkable for the most fine-grained and rigorous of studies as well as broadly interpretive works that draw on an encyclopedic command of related disciplines. Karen is further unique for her far-reaching professional networks, cooperative spirit, generosity, and mentoring of upcoming scholars. I will touch on recurring interests that Karen has continued to build on in multiple directions and at multiple scales throughout her career. Perhaps the most exemplary of these ongoing interests is the accurate characterization of corn and its role in the unfolding histories of regional traditions. I will comment on several opportunities to coauthor timely syntheses of plant-focused archaeological research with Karen. They were unforgettable encounters with her deep scholarship and keen insights.

Fishman, Susannah [42] see Fiore, Matthew

Fitzgerald-Bernal, Carlos (Patronato de Santa Ana)

[222]

Ethnohistorical Approaches to Panamanian Archaeology: Toward an Enhanced Conversation

A significant, yet not fully recognized contribution of Richard Cooke's to the understanding of Panamanian archaeology were his erudite analyses of contact time chronicles and documentation. Through systematic contrast and comparison of documents, landscapes, linguistic and archaeological evidence, particularly concerning environmental transformations, resource use, and sociopolitical change, Cooke was able not only to assess geo-demographic and social complexity issues relevant to archaeological research but also vindicate the ancestral ties of Panama's indigenous populations to their territories and contest colonial narratives. In this paper we will review Cooke's ethnohistorical approach and evaluate methodological and theoretical issues concerning the interpretation of diversity and change in the archaeological record. Of particular concern will be the recent genetic evidence about the relationships between extant and ancient Panamanian populations and the growing trend toward a more informed understanding about intra- and interregional contacts as evidenced (or not) in the archaeological and ethnohistorical records.

Fitzhugh, Ben [99] see Heigel, Darren

Fitzhugh, Ben [99] see Pamplin, Erin

Fitzhugh, William (Smithsonian Institution) and Richard Kortum [23]

Rock Art and Archaeology in the Mongolian Altai, Part I

Petroglyph research and archaeology provide different avenues into the past. Commonly viewed as distinct disciplines, they have looked ill-suited to integration (Jacobson 2023). This specific task, however, was a focus of a National Endowment for the Humanities-supported field project conducted by East Tennessee State University and the Smithsonian Institution in Western Mongolia's Altai Mountains. Khoton Lake is ideally suited for this study because its glacially polished surfaces produced a suitable lithology for image-making dating from the Upper Paleolithic to the present. Carvings are often associated physically with mortuary monuments and other ritual or ceremonial features. This paper demonstrates how the combined study of rock art and dirt archaeology broadens understandings derived from each field independently. Here we discuss (1) direct links comprised of pictorial elements engraved on archaeological monuments and features; (2) dating methods that facilitate the identification of petroglyphs and petroglyph-types with archaeological periods or cultures; and (3) how our understanding of Central Asian culture history can be advanced by combining art historical and scientific approaches.

Fitzhugh, William [23] see Kortum, Richard

Fitzmaurice, Rosamund (University College London) [21]

Forced Labor versus "Slavery": European Ideas and Indigenous Realities in Mesoamerica (CE 600–1521)

This presentation reconsiders what has conventionally been described as Mesoamerican "slavery." Slavery is but one form of forced labor within various informal and institutionalized practices. Thus far, the majority of Mesoamerican forced labor has been studied using colonial sources written or edited by Spanish writers. While useful, these writers brought with them unfamiliar terms and concepts, which were then translated through cultures and back in time to precolumbian Mesoamerican societies. I present the impact of the terms "slave" and "slavery," their import from European vernacular, and thus their influence on new concepts of forced labor. I contextualize my discussion with descriptions and examples of various coercive labor practices defined based on legal, social, and cultural circumstances. Forced labor can take the form of slavery, debt bondage, penal labor, and *corvée* (labor taxation). Much of the forced labor discussed is a consequence of downward social mobility. Those who fall down the social ladder are those most likely to be exploited by those at the top of the social ladder. This presentation examines how these coercive labor practices are used and presented in a series of written, pictorial, and material sources.

FitzPatrick, Mackinley (Harvard University)**[37]***The Andean Khipu and a Precolumbian Computer System: A Postcolonial Perspective*

For decades, researchers have strived to “elevate” *khipus*—Andean knotted cords—to the status of a writing system. However, this discourse is rooted in colonial frameworks for assessing cultural sophistication, which neglect the uniqueness of non-Western systems and obscure the richness of *khipus*. This paper challenges the conventional debate surrounding *khipus* and urges scholars to consider *khipus* as part of a computational system rather than a written one. While *khipus* have been compared to the binary encoding of computers, this analogy was used to show their potential to contain writing. Here the khipu system is directly compared to modern computers, arguing that they exist on a historical continuum of computational progress. This continuum has reduced the extent of human interaction required to store data, fulfill tasks, and make predictions; its culmination may soon be realized with the development of artificial intelligence, capable of functioning without any human input. This paper presents a novel perspective that *khipus* formed part of a malleable and modular computer system, inviting scholars to explore *khipus* as sophisticated tools for data processing and communication in Andean society. This framework fosters a more inclusive understanding of indigenous knowledge systems and challenges Eurocentric biases that have historically influenced archaeological discourse.

Fitzpatrick, Scott (University of Oregon)**[18]***Chair***Fitzpatrick, Scott (University of Oregon)****[18]***Exploration of Diminutive Spaces: The Connected Isolation of Micronesian Islands*

More than 3,000 years ago peoples ventured into Remote Oceania using a combination of sophisticated watercraft, wayfinding techniques—including a celestial compass—and sailing strategies passed down orally through rote learning across generations. Over the course of 2,000+ years, different groups settled islands in Melanesia, Polynesia, and Micronesia, representing the most rapid and expansive diaspora in human history. The latter region stands out as exemplary in terms of how and when smaller islands were settled. In this paper I discuss the historical contingencies that have led to cases of relative isolation on some islands in Micronesia through time while in others extensive exchange systems developed to help ensure survival, biological diversity, and the acquisition of desired or needed resources. The settlement of Micronesia represents environmental adaptation par excellence; however, years of colonial rule and globalization—coupled with climate change—have in some ways led to a greater degree of marginalization, disconnections from traditional lifeways, challenges to conducting archaeological research, and prospects of eventual island abandonment.

Fitzpatrick, Scott [229] see Ardren, Traci

Fitzpatrick, Scott [263] see Jorissen, Philippa

Fitzsimmons, James**[292]***Discussant*

Fjellström, Markus [151] see Seitsonen, Oula

Flad, Rowan (Harvard University)**[19]***Discussant*

[19]

Chair

Fladd, Samantha (Washington State University), Sarah Oas (Archaeology Southwest) and Sarah Kurnick (University of Colorado, Boulder)**[305]***Collections Care as Care Work: Examining the Gendered Nature of Museum Work in Archaeology*

Despite women receiving the majority of archaeology PhD degrees for decades, issues with gender representation continue within the discipline, such as the well-documented underrepresentation of women in prestigious academic positions. It follows that the majority of archaeological museum collections stem from projects led by male archaeologists, yet the care of these collections is largely undertaken by museum professionals, a field that has been and continues to trend predominantly female. In this paper, we compare female representation in the traditional academic archaeology with female representation in archaeological museum spaces. Often categorized as a “pink collar” career, we consider the ways archaeology conducted within museums has been classified as “care work” and thus impacted by gender devaluation. We argue the framework of “care” associated with museum work leads to the negation of individual scholarship (or agency) associated with similar research, collaboration, and outreach efforts in more traditional academic settings. As ethical changes in our discipline spur increasing utilization of museum collections, the intersections of gender, care, prestige, and valuation will require further attention.

Fladd, Samantha [325] see Simeonoff, Sarah

Fladeboe, Randee (University of Florida)**[194]***Comparative Analysis of Pathological and Ontogenetic Variation within Archaeological Macaw and Turkey Assemblages Using Micro-CT Data*

This paper presents the utility of computer tomography (CT) data and the VolumeGraphics StudioMax software program for digital reconstruction in aiding zooarchaeological analyses. A wide range of archaeological specimens of captive macaws from the US Southwest and captive turkeys from across central and southern Mexico were selected for CT scanning, with the goal of identifying and evaluating osteological patterning representative of population demographics and husbandry techniques. This paper presents this comprehensive collection of avian skeletal data and demonstrates how this technology enabled the assessment of morphological variation between individuals within and between sites, age determination, and the detection of osteological traces linked to sex, health conditions, traumatic events, and human rehabilitation.

Flammang, Amandine (Université libre de Bruxelles)**[185]**

Chair

Flammang, Amandine (Université libre de Bruxelles)**[185]***From the Dead to the Living: An Interdisciplinary Analysis of Late Period Open Sepulchers, Upper Nepeña Drainage, Ancash, Peru*

The ubiquity of open sepulcher type funerary contexts in the Andean highlands is a salient fact. Previous work and new surveys in the Pamparomás and Chaclancayo valleys of the Upper Nepeña Drainage have identified more than 60 such funerary contexts. Over the past two years, systematic excavations of selected sites coupled with a landscape approach has allowed us to better understand these structures and their significance within late prehispanic society. Here, the author reviews current knowledge on late period (AD 600–1532) funerary practices in the Peruvian highlands and contrasts this with the recent results from the

Upper Nepeña Drainage. Using archaeology, bioarchaeology, and a landscape approach permits us to explore variations in typology, chronology, function, and placement of these monuments. The methodological challenges related to these contexts—including their highly disturbed nature, consequence of several looting episodes during colonial and modern times will also be addressed. This study shows that an interdisciplinary approach provides a holistic understanding of these contexts, the funerary practices associated with them, and the populations living in the region at the time, despite the many looting episodes to which they were subjected to.

Flammang, Amandine [185] see Serra, Margot

Flanagan, Darcie [213] see King, Eleanor

Fleisher, Jeffrey (Rice University)

[250]

A Supplemental Approach: The Influence of Ann Stahl's Interdisciplinarity to African Archaeology

There is a long history of interdisciplinary research on the precolonial African past, with historians, archaeologists, and historical linguists seeking out and drawing on insights from their allied disciplines. These scholars often seek to integrate different types of data or use one type of data (like archaeology) as support for others (oral traditions/histories, linguistics). What Stahl's work in Ghana has offered, however, is a theoretical approach to thinking about way that different types of data must be understood as distinct forms of knowledge. One important result of this is a critical engagement with the way that scholars attempt to triangulate between these data fields, without privileging one over the other. In this paper, I explore these aspects of Stahl's work and show how it has impacted the way that I have worked to re-conceive the relationship between archaeology and historical linguistics, in the context of my own research in Zambia.

Fleming, Edward [337] see Briggs, Emily

Fleming, Lacey (HNTB Corporation)

[274]

Discussant

Fleming, Robin

[22]

Chair

Fleskes, Raquel (Dartmouth College)

[16]

Historic Genome from the First Baptist Church on Nassau Street: Reflections on Process and Product

Community members, stakeholders, and congregation members expressed interest in pursuing DNA testing of the Ancestral Individuals from the Historic First Baptist Church. In collaboration with the Let Freedom Ring! Foundation, successive community engagement meetings were held to explain the process of ancient DNA testing and answer questions from the community. The descendant community elected to uncover three burials for osteological analysis and DNA testing. Preservation of the bone was variable, and DNA was successfully extracted, indexed, and whole genome enriched for one Ancestral Individual at the University of Connecticut. The enriched DNA library was sequenced on an Illumina HiSeq. Results showed typical patterns damage and low amount of exogenous mitochondrial contamination. The Ancestral Individual was affiliated with African reference populations and displayed a R1b Y chromosome haplogroup and L3d mitochondrial

DNA haplogroup. The results were shared with the community by explaining the testing process and outcomes. The community elected to not continue DNA testing, as the harm of destructive testing outweighed the likelihood of successful results. In summation, a stepwise community engagement model centered the descendant community as the decision-makers in the direction and duration of the study.

***Images of human remains may be shown in this presentation.

Fletcher, Emily

[173]

Digitizing Handwritten Field Notebooks: The Impacts of Image Preprocessing on OCR Text Extraction

Although field notebooks are created as a resource for future archaeologists to reference in their research, the labor required to digitize handwritten notes presents a barrier to their incorporation in state-of-the-art computational analyses. In this research, I explore if image pre-processing can improve the accuracy of text extracted from handwritten field notebooks by Optical Character Recognition. I apply image pre-processing to scans of handwritten field notebooks from the 1970s excavations of the Gulkana site, a precontact Northern Dene site in Alaska's Copper River Basin. These documents contain important data regarding native copper innovation that occurred at the Gulkana site, but the lack of digital spatial data hinders analysis and public interpretation.

Fletcher, Mikayla (Tulane University)

[232]

Ritual Landscapes of the Lower Mississippi Valley: The Marksville Archaeological Project

The Lower Mississippi Valley (LMV) has a long history of monumentality, with early examples of monumental earthworks confidently dated to the Middle Archaic (6000–3000 BC) and Late Archaic (3000–1000 BC) periods, and other mounds dating to Woodland (after 1000 BC) and Mississippi (after AD 1200) periods. The Middle Woodland period Marksville mound site (AD 1–350), located in central Louisiana, is associated with the Hopewell Interaction Sphere, connecting Marksville to Hopewell ceremonial centers in the Ohio Valley and elsewhere in eastern North America. This paper will provide a comparative site layout analysis of Marksville to the earlier monumental site of Poverty Point (16WC5) and the Marksville period site of McGuffee (16CT17), along with comparisons to Hopewell “core” sites of the Hopewell Mound Group (33RO27) and High Banks Works (33RO24). This extensive comparative analysis provides an opportunity for examining the manifestation of long-distance communication and exchange from the perspective a site within a particular historical trajectory of monumental construction. This will contribute to the understanding of the degree of influence of Hopewell ceremonialism on the design and construction of the Marksville site within the context of the long history and presence of monumental constructions within the LMV.

Fletcher, Roland (University of Sydney)

[155]

Chair

Flexner, James (University of Sydney)

[18]

Chair

Flexner, James (University of Sydney)

[18]

All along the Watch Tower: Surveillance, Survivance, and the Making of a Christianized Landscape in the Mangareva Islands, French Polynesia

The transformation of island environments and settlement patterns resulting from missionization and Christian conversion is a well-developed theme in the historical archaeology of Oceania. The Mangareva

Islands in French Polynesia provide an exemplary case study, featuring dozens of stone structures built by the Catholic Pères des Sacrés Cœurs beginning in the 1830s. These include a massive cathedral in Rikitea, stone churches on each of the main inhabited islands from the colonial era, boys' and girls' schools and associated infrastructure, triumphal arches, a royal palace complex for the high chief Maputeoa, and multiple watch towers built to monitor the comings and goings of ships and canoes. On closer inspection, however, a simple story of colonial dominance resulting in new settlement patterns is insufficient to explain the development of the landscapes in the Mangareva Islands. Maputeoa and other high ranking Mangarevans such as his uncle, Matua, had their own political agenda in their interactions with the more historically prominent missionaries. As with any landscape containing elements of "surveillance," the buildings themselves simultaneously provided the social spaces for resistance. An analysis of the settlement patterns of colonial Mangareva undermines the colonial narrative and demonstrates the Polynesian shaping of mission life.

Flores, Alexandra (Ohio Valley Archaeology Inc.) and Jarrod Burks (Ohio Valley Archaeology Inc.)

[283]

A Multi-instrument Geophysical Survey Comparing the Effects of Plowing on the Geophysical Signatures of a Precontact Earthwork in Perry County, Ohio

Ohio is home to a significant number of precontact period earthworks—mounds and enclosures—many of which have been affected by plowing to various degrees. While magnetometer surveys have produced remarkable images of earthwork ditches and embankments in the Middle Ohio Valley, few other instrument types have been employed. For this study, magnetometry, ground-penetrating radar (GPR), and electromagnetic induction (EM) were used to survey a small ditch-and-embankment enclosure bisected by a fence line. Plowing has flattened the ditch and filled the embankment to one side of the fence, while on the other the earthwork is readily visible. The earthwork ditch was most notable in the radar data from the plowed area, but the conductivity component of the EM results produced the most consistent indications of the earthwork in both plowed and minimally plowed contexts. Most surprisingly, the earthwork was near invisible in the magnetic data. These results highlight the importance of using multi-instrument surveys for detecting the remains of large earthen constructions, even in a region known for its excellent magnetic survey results. The results also show the importance of geology and soils in determining the outcome of magnetometer surveys.

Flores, Irad [248] see Gutiérrez, Gerardo

Flores, Luis [212] see Witt, Rachel

Flores, Zoe [99] see Sammons, Claire

Flores-Blanco, Luis (UC Davis), Lucero Cuellar (UNMSM), Mark Aldenderfer (UC Merced), Charles Stanish (University of South Florida) and Randy Haas (University of Wyoming)

[306]

Did Archery Technology Precipitate Complexity in the Titicaca Basin? A Metric Analysis of Projectile Points, 11–1 ka

The origins of Andean archery technology and its impact on social organization remain unclear. This analysis uses metric data from 1,179 projectile points from the Lake Titicaca Basin, 11–1 ka, to identify the timing of archery technology and its potential social consequences. Our data reveal a dramatic decrease in projectile point size at 5 ka, spanning the Late/Terminal Archaic period boundary, signaling that archery technology likely emerged during the Terminal Archaic period, 5–3.5 ka. This technological transition coincided with the growth of settlements, a surge in the use of exotic goods like obsidian, low intergroup violence, and incipient agropastoralism, all of which intensified during the subsequent Formative period

when monumental ceremonial centers emerged. These findings suggest that archery technology did not incite violence but rather contributed to emerging cooperative dynamics that expanded regional exchange networks and community aggregation. We hypothesize that archery technology may have expanded economic opportunities or raised the cost of violent interaction, thereby facilitating new cooperative norms.

Flores-Colin, Alberto (CONAHCYT-CEDESU/Universidad Autónoma de Campeche) and Demián Hinojosa-Garro (CEDESU/Universidad Autónoma de Campeche)

[31]

Aguadas of the Bajo el Laberinto Region: Form, Distribution, and Biocultural Importance

Aguadas are permanent or temporary water reservoirs distributed throughout the Elevated Interior Region (EIR). These wetlands have formed complex ecosystems that are essential for the survival of many species and are sometimes the only source of fresh water for animal and human communities in the region.

Archaeological research has shown that most of the *aguadas* were built by the ancient Maya as part of their water management strategies, which they adapted and developed over the centuries. This paper presents the results of the documentation of the *aguadas* in the Bajo el Laberinto region, which was carried out using remote sensing techniques (lidar and satellite imagery) and field verification of selected examples. The results of this process allow us to know the morphological characteristics of the *aguadas*, such as their shape, area, estimated capacity, and distribution, essential information to come closer to understanding the importance they had for the development and maintenance of the prehispanic population of the region, as well as their current relevance as wetland ecosystems.

Flores Esquivel, Fernando

[78]

Beyond the Kaanul: Setting Some Questions and Initial Thoughts on the Urban Layouts of Calakmul and Its Region

The ancient city of Calakmul was the locus of important human developments throughout a period of no less than 15 centuries, during which various social groups, ruling houses and urban palimpsests followed one another, and sometimes coexisted, until its definitive abandonment. Nowadays, lidar technology provides the most detailed and accurate type of documentation that can be generated about the remains of an ancient landscape. This allows an understanding of the details of a built environment on an unprecedented scale; something to which settlement archaeology aspired from its very beginnings. Parallel to the initial classification of a large amount of data that the new relief models provide, identifying the imprint of the different construction projects, as well as establishing their approximate chronology and development, becomes a fundamental task. Some architectural and spatial patterns seem to emerge not only from the analysis per se that we have made of these models but also from their comparison with other contemporary centers of the Maya Lowlands. In this paper we propose that these potential urban projects could be representative of certain sociopolitical systems during specific times, and a testimony of their materialization, as well as the canvas for their gradual change to new ones.

Flores Esquivel, Fernando [78] see Kupprat, Felix

Flores Esquivel, Fernando [78] see Reese-Taylor, Kathryn

Flores García, Irad [216] see Richter, Kim

Flores Manzano, Carlos

[320]

Landscape and Settlements in Cuscatlán, El Salvador

Several explorations were carried out in Cuscatlán (Amaroli 1986; Amaroli 1992; Velázquez and Hermes 1995; Barrera 2018; Arevalo 2018), where the Metropolitan Area of San Salvador (AMSS), El Salvador, now

stands, including explorations resulting from archaeological rescues and projects based on the model of preventive archaeology (Bozoki-Ernyey 2007) along with the recording of various fortuitous findings in the area, southeast of the magnificent San Salvador Volcanic Complex (SSVC) (Ferres et al 2011). In the current study, the data has been organized using geographic information systems (GIS) to analyze the cultural change before and after the diverse volcanic eruptions that affected prehispanic populations, including the Maar Plan de la Laguna (Amaroli and Dull 1998) and Ilopango Caldera (Dull et al. 2019) from the Middle Preclassic period to the present. This research aims to provide a perspective on the cultural change forced by volcanic and tectonic dynamics, as well as the complexity and archaeological richness in Cuscatlán.

Flores-Muñoz, Julieta (Instituto Politécnico Nacional)

[134]

Discussant

[134]

Chair

Flores-Muñoz, Julieta (Instituto Politécnico Nacional)

[194]

Daily Life Rhythms of the Mexican Mountains: Narrating Milpa and Coffee Landscapes in Baxtla and Mixtla de Altamirano

Within the Mesoamerican worldview, maize is synonymous with the body and represents the primary food of the human being, accompanied by a complex planting system known as milpa. Said system, we believe, celebrates the interrelation between the diversity of species, serving, in this way, as a metaphor to understand our social construction. In this metaphor, there is an interrelationship between human beings and the landscape in a chain of changes manifested in daily life; that is to say, the changes are visible by exploring inhabiting, how we produce, and how our environment produces us. Through the rescue of this interrelation exploring the narration of daily life in Baxtla, and Mixtla de Altamirano, this presentation aims to blur the fine lines that separate the milpa and the coffee plantations and the many ways in which this traditional agroforestry systems have changed.

Flores-Muñoz, Julieta [134] see Sallum, Marianne

Florin, S. Anna (Australian National University)

[217]

Chair

Florin, S. Anna (Australian National University), Andrew Fairbairn (University of Queensland), May Nango (Gundjeihmi Aboriginal Corporation), Djaykuk Djandomerr (Gundjeihmi Aboriginal Corporation) and Chris Clarkson (University of Queensland)

[217]

Early Plant Food Use and Processing: Insights from Madjedbebe Rockshelter, Northern Australia

A broad spectrum diet, including the exploitation of a variety of wild plant foods, has historically been considered a precursor to the origins of agriculture. However, increasing evidence globally points to the use of a range of plant foods, including seeds and underground storage organs, by Pleistocene humans and their closest ancestors. At Madjedbebe, a rockshelter in northern Australia, early occupation by ~65 kya is associated with the use of a diverse range of plants, including evidence for intensive processing and associated technologies. This presentation considers this early diet and its change over time in response to changing environment and demography. This included a broadening of the diet during drier glacial stages, as well as changes in the seasonal round and incorporation of new foods with the formation of freshwater wetlands following sea-level rise in the late Holocene. The foundations of the economy evidenced at Madjedbebe, including seasonal mobility, a broad diet, and requisite plant processing and grinding technologies, were, however, maintained through time. Broad spectrum foraging is, therefore, a significantly older practice than

once hypothesized and a key component of the resilient economic system evidenced at Madjedbebe, allowing for cultural continuity in the face of pronounced environmental change.

Flowers, Edward [307] see Woollett, James

Flynn, Erin (PAL)

[187]

The Oldest Dates from the Ocean State: New Data for Late Paleoindian Habitation in Rhode Island

Two of the earliest radiocarbon dates in Rhode Island have been obtained from two different archaeological sites that help connect isolated Paleoindian artifacts found in the state to the larger historic narrative of Native American habitation in the Northeast. The excavation of these sites, discovered during a CRM survey, were conducted within the Section 106 consultation process that dictated the extent and focus of the excavations. Charcoal recovered from intact cultural features provided valuable information about Paleoindian settlement patterns. The dates further suggest that Late Paleoindian people in southern New England had a generalized mode of subsistence rather than following a specialized model, in which a highly mobile group focused on exploitation of large, now extinct animal species. The Pine Swamp and Crossroads sites add to the growing body of evidence supporting Paleoindian period occupation in southern New England in a variety of micro-environments.

Flynn-Arajdal, Yasmine (Université de Montréal)

[246]

Chair

Flynn-Arajdal, Yasmine (Université de Montréal)

[246]

Producing and Stretching Identity: Earspools and Childhood in the Maya Area

Iconographic sources indicate that the wearing of earspools by ancient Maya peoples was so ubiquitous that it was an essential part of personhood, a status put into jeopardy when earspools were removed and replaced with paper in scenes of almost naked captives or of warriors. Previous studies of archaeological examples of jade and shell earspools have largely focused on high-status adults, while few studies have considered their importance among children. This paper examines the act of piercing infants' ears as a key rite of passage in the making of social persons in the Maya area. It examines, in particular, Classic period ceramic figurines, sculpted works, and painted representations of children and their developmental stages and contextualizes these images with ethnohistoric and ethnographic literature on children. Although ear piercing was a key rite of passage, this paper also underscores the stretching of the ear over time, making this ritual a long-winded process where social identity was constantly reworked.

Flynt, Conner (Underwater Maya Project)

[5]

Sea-Level Rise and Settlement at Ta'ab Nuk Na, Belize: Analyses of Marine Sediment from the I-line, 4m Transect

The ancient Maya created a culture with writing, religion, and vast trade networks. These trade networks are evident on the southern coast of Belize, where archaeologists have found sites dedicated to salt making. This paper will discuss Ta'ab Nuk Na, one of these sites. Sediment and charcoal samples were collected by the Underwater Maya Research Group led by Heather McKillop and E. Cory Sills. I subjected these samples and components within them to loss-on ignition, radiometric dating, and microscopic analysis. Loss-on ignition was used to ascertain organic material percentage by burning sediment at high temperatures to burn off organic components that are weighed and compared to unburned sediment. Microscopic analysis was used to determine the organic makeup of the sediment across the excavation. Radiometric dating was used to determine dates for site occupation and sea-level rise. Loss-on ignition and microscopic analysis helped

accurately determine areas of the excavation associated with human activity. Radiometric dating shows when the site was abandoned due to sea-level rise. This paper sheds light on when the site was occupied, when sea-level rose and how this affected the ancient Maya, and the organic material levels within the site.

Foe, Aldo (University of Illinois, Chicago), Elizabeth Goodman (University of Illinois, Chicago), Russel Quick, Jake Zeisel and Enis Cetin (University of Illinois, Chicago)
[105]

Rethinking Site Survey: An Interdisciplinary Approach to Site Modeling and Prediction in a Hazardous Environment
 Hazardous and difficult-to-navigate terrain often impedes investigation and recovery of missing individuals in forensic archaeological contexts. Here we discuss novel solutions at one such site, a 1,750 m high sheer limestone cliff in Southeast Asia. In addition to the difficult terrain, investigation and recovery is hampered by the scale of the geological feature, which includes a 700 m near-vertical drop, portions of which are covered with dense subtropical vegetation, which makes identifying and accessing potential recovery sites exceptionally challenging. We used an interdisciplinary team to employ remote sensing technologies, artificial intelligence-based computer modeling and analysis, light detection and ranging (lidar), 3D mapping, geospatial analysis, and anomaly detection algorithms on drone video footage to target locations for investigation. Here, we present the outcome of this study, carried out between 2020 and 2023. The result is a focused, systematic approach that limits the time investigation and recovery personnel spend in hazardous conditions—thus ameliorating risks while maximizing recovery potential. The project combines novel approaches and exemplifies interdisciplinary approaches to an anthropological problem.

Foguth, Adesbah
[269]

#Land Back! Tribal Land Exchanges and the New Mexico State Land Office (NMSLO)
 There are over nine million acres of trust land across the state of New Mexico. This land is not public land; rather, it is land held in trust by NMSLO for the benefit of its beneficiaries (e.g., public schools, hospitals, colleges, and other public institutions). Revenues are raised through the leasing of lands to the mining, renewable energy, and oil and gas industries. The mission of the NMSLO, then, is to manage the land for maximum economic yield. This is where land exchanges fit in. Land exchanges are a tool designed to increase returns for the beneficiaries by acquiring land that is of equal value or of greater value to the State. And sometimes, that means NMSLO is interested in giving land back to Tribes in exchange for land that can generate revenue for its beneficiaries. Although it is not quite “land back” per se, it is a win-win situation for state beneficiaries and for Indigenous Nations. This poster will discuss the history of NMSLO land exchanges, our learnings on the process of tribal consultation, how programmatic agreements create greater tribal engagement in the exchange process, and the unique issues that hinder Tribes from acquiring state land.

Foguth, Adesbah [269] see Ortega, Ethan

Folch, Ramon
[230]

Sugar, Alcohol, and Toys: Uses and Changes in Pottery Following the Spanish Conquest of Comitán, Chiapas, Mexico
 Following the work presented at SAA 2023 about identifying specialized potters in the Comitán Valley of Chiapas, a study of change brought by the Spanish conquerors is presented. The local potters had to innovate as their work was integrated into sugar cane processing via the molds, or “*pilónes*,” used to crystalize sugar as well as water-carrying jars used in distillation processes of liquor. Archaeological, historical, and ethnographic data is presented to understand how tracking these changes helps to get a broader understanding of the acculturation of local pottery traditions as a historical development. Ethnographic work tells the story of how the use of pottery in sugar making was abruptly stopped for political reasons as an example of the way material culture is impacted by sociopolitical phenomena.

Follensbee, Billie (Missouri State University)

[29]

Discussant

[29]

*Chair***Follensbee, Billie (Missouri State University)**

[29]

Learning the Ropes: Cordage, Knots, and Lashings, Their Purposes and Their Meanings in Olmec Art

While only small fragments of actual cordage have been recovered in Gulf Coast Olmec excavations, depictions of cordage figure prominently in Olmec and Olmec-related art. Reliefs of string, rope, and knots appear as costume components on Colossal Heads, on figures in the round, and in relief images on thrones and stelae, as well as in depictions of rope used as an instrument to connect, secure, or bind objects or people. The meanings behind these rope-based costume elements and paraphernalia have proven elusive, however. While some scholars suggest that depictions of rope symbolize captivity and subordination, others suggest that this imagery refers to familial connections or even symbolizes umbilical cords, and still others suggest that depictions of rope indicate control, power, and status. This project closely examines depictions of cordage to identify the types of knots and lashings used in Gulf Coast Olmec depictions. The resulting identifications help to reveal the purposes of the different types of ropework and bring new understanding to the nature of what is portrayed in this sculpture. Further comparisons of Olmec depictions of rope with associated objects and closely related motifs shed additional light on the meanings and symbolism of Olmec cordage imagery.

Foran, Debra (Wilfrid Laurier University), Andrew Danielson (University of British Columbia), Gregory Braun (University of Toronto), Grant Ginson (Trent University) and Rose Campbell (University of California, Los Angeles)

[174]

Inter-site Relationships on the Madaba Plain: Surveys around the Ancient Town of Nebo (Khirbat al-Mukhayyat, Jordan)

Khirbat al-Mukhayyat is located approximately 6 km northwest of the city of Madaba and has long been associated with the ancient town of Nebo. The Khirbat al-Mukhayyat Archaeological Project (KMAP) was established to investigate the economic and ritual importance of the site across multiple periods and its connection to contemporary sites in the region. Building on the work of the Tell Madaba Archaeological Project (TMAP), KMAP continued the tradition of investigating the role of presumed urban centers and their relationship to other sites within a regional settlement network. This poster will present the results of KMAP's four survey seasons (2017–2023) as well as two surveys conducted by TMAP at the nearby sites of Libb and Ma'in. This survey work has investigated a number of Late Neolithic, Chalcolithic, and Early Bronze Age sites around Mukhayyat. A series of Iron Age hill forts and villages has also been identified in the region. In addition, a number of burial caves, likely dating to the Byzantine period, have been identified in the wadi west of the site. The evidence produced by these surveys clearly illustrates the importance of this region throughout antiquity.

Ford, Anabel (University of California, Santa Barbara)

[129]

Reflections on Career Choices: Alliance Building in Archaeology

It was the writing and award of NSF Women in Science grant that brought to the fore for me the issues of women in archaeology. Motivated to build on my associations, I sought speakers in archaeology that could represent the world of possibilities. In that search, I was able to meet many women in the field and learn of existing informal gatherings that were essentially network support groups, something that should be formalized for our national meetings. These encounters revealed the different paths that women in archaeology choose to fulfill their academic aspirations as well as personal commitments. As I reflect on my own path, I can see that alliances and networks are at the foundation of a fulfilling career.

Ford, Anabel [202] see Fedick, Scott
 Ford, Anabel [251] see Haines, Helen
 Ford, Anabel [295] see Robin, Cynthia
 Ford, Anabel [172] see Tran, Justin

Forde, Jamie (University of Edinburgh)
[252]

Material Transformations and Vegetal Ontologies in the Postclassic and Colonial Mesoamerican Flower Worlds
 Prehispanic visual sources and colonial alphabetic texts provide rich descriptions of what scholars have termed “the Flower World” in Mesoamerica. This idealized celestial realm was filled not just with flowers, but an array of other precious substances, ranging from gemstones to precious metals, to bird feathers and butterflies. An interesting feature of prehispanic iconography is that some of these distinct substances are represented with identical motifs. What accounted for such visual conflations? These materials ostensibly did not transform into one another in a fashion akin to alchemy; instead, evidence suggests they were all linked by being seen as in states of constant transformation and growth, exhibiting ontologies akin to flowers and other plants. I argue that it was this fluidity and ever-changing nature of these substances that allowed other materials introduced from Europe to be absorbed into the Flower World during the colonial period; namely, silk. By adopting silk textiles and other liturgical vestments, and folding them into these same Indigenous ontologies, it became possible for a new vision of this Mesoamerican celestial realm to be materialized in early Catholic churches.

Forest, Marion (Chronicle Heritage), Andrew Somerville (Iowa State University), Claudia María López Pérez (Instituto Nacional de Antropología e Historia) and Jennifer Saumur (Centre National de la Recherche Scientifique)
[214]

Teotihuacan and Its Interregional Interactions during the Epiclassic Period: New Data from the Suburban Neighborhood of Hacienda Metepec
 Interregional relations are widely documented for Classic period Teotihuacan (AD 1–600), where a rich and extensive network of goods, people, and ideas connected the ancient city with the rest of Mesoamerica. After its political collapse at about AD 550/600, Teotihuacan remained a large population center during the subsequent Epiclassic period (AD 600–800). The degree of integration of these post-collapse Teotihuacan households into broader regional or interregional networks, however, remains poorly understood. In this paper, we present recent data obtained from Hacienda Metepec, a peripheral neighborhood of Teotihuacan that was occupied before and after the collapse. Based on the study of artifacts obtained during two seasons of field excavations (obsidian, ceramics, figurines), we infer that residents of Hacienda Metepec were primarily engaged in local exchange networks, having limited interactions with communities beyond the Valley of Teotihuacan. Nonetheless, the Epiclassic residents also participated in broader conventions of making and decorating ceramics and figurines and engaged in ritual practices shared with communities across highland Mesoamerica. This case study demonstrates that while ideas and customs were still exchanged at interregional scales after the collapse of Teotihuacan, the economic network had been much reduced in scale.

Forste, Kathleen (Brown University), Amalia Pérez-Juez (Boston University), Alexander Smith (SUNY Brockport), Helena Kirchner (Universitat Autònoma de Barcelona) and Guillem Alcolea (Universitat Autònoma de Barcelona)
[179]

From Terrace to Tray: Agriculture and Foodways at a Thirteenth-Century Alqueria
 The preparation of a meal begins with the acquisition of ingredients—and for much of our human past, this has meant growing or gathering. Thus, food production through farming is a natural starting point for investigating foodways, especially for communities that are self-sufficient or have limited access to markets, such as agricultural peasant communities or island communities. One such community is the medieval Muslim

population of the Balearic Islands, who inhabited part of Muslim Iberia (al-Andalus) from the tenth through thirteenth centuries CE. In this paper we bring together botanical, faunal, ceramic, and spatial data from the *alqueria* (farming village) at the site of Torre d'en Galmés, Menorca, along with contemporary textual evidence (cookbooks, estate inventories, tax treaties) to investigate how the inhabitants of this settlement fed themselves, from agricultural terrace to tray. More specifically, we investigate (1) what aspects of farming and foodways practices can we reconstruct at Torre d'en Galmés?; (2) how can we use remains of meals to reconstruct cultivation practices?; and (3) how does this information compare to the mainland; i.e., are there any differences between this rural island settlement and mainland rural settlements?

Forste, Kathleen [191] see Smith, Alexander

Forton, Maxwell (Binghamton University)

[244]

Follow the Pictorial Path: Assessing Rock Imagery and Human Movement at Chaco Canyon

A core principle of professional archaeology is the preservation and consideration of context. For studies of rock imagery, this necessitates documenting the context of panels in relationship to the larger cultural landscape. Using landscape theory, I assess the placement of petroglyphs and pictographs at Chaco Canyon, NM, in relation to known and suspected corridors of pilgrimage movement. A central theme built into Chaco is sacralized human movement, with systems of public architecture, roadways, and shrines designed to profoundly shape people's experience of moving through the canyon. Chaco is popularly interpreted as a regional ceremonial center and pilgrimage destination, in keeping with sacralized movement being an integral aspect of the rituals and ontologies of historic and contemporary Puebloan communities. I assess this model of Chacoan social organization through identifying the spatial relationship of rock imagery to access points and formal routes through Chaco. Rock imagery is ethnographically documented as an integral feature of pilgrimage journeys and cosmographically defining ceremonial spaces in the American Southwest, but the relationship of Chaco's landscape iconography to formalized movement and ceremonial performance remains largely unassessed. My dissertation research demonstrates the integral role rock imagery played in ritual performance on the topographic stage of Chaco Canyon.

Foster, Cheryl (Louisiana State University), Heather McKillop (Louisiana State University) and E. Cory Sills (University of Texas, Tyler)

[5]

Sea-Level Rise and Settlement at Ek Way Nal: Coring the Past

Excavations in the spring and summer of 2022 were carried out at the underwater ancient Maya salt work of Ek Way Nal in Punta Ycacos Lagoon in Paynes Creek National Park, Belize. Ek Way Nal provided salt to the ancient Maya during the Late and Terminal Classic periods (600–900 CE). In addition to excavations in buildings at the site, a 1 × 2 m unit was excavated to extract a sediment column for examining the relationship between the ancient Maya settlement at Ek Way Nal and sea-level rise. In this presentation, the excavations, extraction of the sediment column, and processing it for laboratory analyses are described. Field observations are discussed. Fine red mangrove root (*Rhizophora mangle*) and charcoal samples were extracted from the sediment column for radiocarbon dating. The results from the datum core excavation indicate that sea-level rise occurred before, during, and after the ancient Maya occupation at Ek Way Nal.

Foster, Jenna (Natural History Museum of Utah; University of Utah), Shannon Boomgarden (Natural History Museum of Utah) and Ian Farrell (Natural History Museum of Utah; University of Utah)

[294]

Experimental Archaeology in Maize Farming at Range Creek Field Station, Utah

Archaeological evidence in Range Creek Canyon, Utah, shows a heavy reliance on maize farming during the

Fremont occupation, 900–1200 CE. Evidence includes numerous corn cobs, ground stone tools, and food storage sites. Since 2013, researchers at the field station have used actualistic maize farming experiments to provide a unique perspective on the difficulties of farming in arid environments with simple prehistoric technology. The maize farming experiments have been ongoing each year with the help of staff, students, and volunteers. The experiments are designed to produce quantitative data on the costs and benefits of irrigation as well as how to conduct other farming activities such as planting, weeding, and harvesting maize using only tools available 1,000 years ago. The experiments show that Fremont farmers would have relied on surface irrigation from Range Creek, a perennial stream, to improve maize yields. Students participate in every stage, from clearing fields in the spring to harvesting the maize and analyzing it in the lab during fall semester. Our experiments not only provide a truer experience of what prehistoric farming was like in the canyon, but also teaches students how to design and implement experimental research to supplement the archaeological record.

Foster, Jenna [294] see Boomgarden, Shannon

Foster, Jenna [294] see Farrell, Ian

Foti, Peyton (University of New Orleans) and Ryan Kennedy (Indiana University, Bloomington) [131]

Comparative Analysis of Food Production, Waste, and Socioeconomic Dynamics in Red Light Districts and Brothel Sites across Three Port Cities during the American Industrial Revolution

In this paper, I present a comparative analysis of brothel sites and red-light districts in three major port cities during or around the period of the American Industrial Revolution. With a focus on Storyville in New Orleans, Louisiana, I will use Five Points in Manhattan, New York, and Hell's Half Acre in Los Angeles, California, as sites for comparison. This analysis examines faunal data to provide insight into food production, waste, economic factors, and socioeconomic dimensions at these sites. The selection of these three cities as case studies is motivated by their geographical locations as bustling port cities. This allows for an examination of the transportation networks of food commodities within the United States and from international sources through these port facilities. Utilizing a comparative approach, this analysis seeks to discern commonalities and distinctive characteristics among these red-light districts situated in diverse locales. In particular, I aim to uncover the relationships between urban sex trade, food consumption, and broader societal contexts. In addition to highlighting food distribution and sourcing and the potential implications of racial prejudice on food waste practices, this research also seeks to illuminate the resilience, adaptability, and perseverance of sex workers in the face of challenging circumstances.

Fournier, Nichole, Jelmer Eerkens (University of California, Davis), Tammy Buonasera (University of California, Davis), Glendon Parker (University of California, Davis) and Monica Arellano (Vice Chairwoman and MLD of Muwekma Ohlone Tribe) [272]

Who Died Prematurely? A Demographic Profile of Middle and Late Period San Francisco Bay Area Juveniles

This study explores the demographic profile of a Middle and Late period juvenile burial assemblage from a San Francisco Bay Area site, CA-ALA-329 (bearing the Muwekma Ohlone name of Mánni Muwékma Kúksú Hóowok Yatiš Túnnešte-tka, or Place Where the People of the Kúksú (Bighead) Pendants are Buried). Sex-ratio was established using a proteomics method of sex identification. Stress was evaluated based on presence/absence of skeletal indicators. Social status and distribution of wealth were ascertained based on the quantity/type of associated grave goods. The sex-ratio is about equal. Skeletal indicators consistent with nutritional deficiency, disease, and/or metabolic disorder are present, particularly among infants. There is a correlation between age-at-death and quantity and type of artifact, as infants were frequently buried with the elaborate grave goods. Distribution of wealth appears more equal in the Late period. Each phase of this project was designed with full support of living descendants of Ohlone peoples, to contribute to the scientific record of Bay Area Peoples over thousands of years. Ultimately, we aim to support Ohlone traditional knowledge of cultural continuity in the Bay Area and aid in federal recognition. This study focuses on childhood in the Bay Area, thereby expanding our picture of the past.

Fowler, William (Vanderbilt University)

[11]

Moderator

[11]

*Discussant***Fowles, Severin (Barnard College, Columbia University)**

[146]

Discussant

[84]

*Chair***Fowles, Severin (Barnard College, Columbia University), Lindsay Montgomery (University of Toronto) and Michael Adler (Southern Methodist University)**

[84]

Deep History of the Picuris Watershed

Provocative new evidence from research on tribal lands suggests that Picuris was already a demographic center of the Eastern Pueblo world at the start of the tenth century CE. In this paper, we report on recent surveys and excavations at the Eagle Pile Site, home to a large Developmental period (850–1150 CE) village. We summarize what is currently known about the hundreds of pit houses that likely composed the village; we draw on a growing radiocarbon dataset to chronologically situate the village within the region's deeper Holocene history; and we undertake compositional analyses of on-site Red Mesa Black-on-White and Kwahe'e Black-on-White pottery to explore exchange networks, particularly Picuris's early connections to the emerging regional system based in Chaco Canyon.

Fowles, Severin [84] see Conlogue, Emily

Fowles, Severin [84] see Ni, Jenny

Fox, Kara

[268]

aDNA Analysis of Prehistoric Salmon Remains at Housepit54

Salmon were a critical resource in the Indigenous economies of the Pacific Northwest. There are five Pacific Salmon species that spawn within the Fraser River and its tributaries: sockeye (*Oncorhynchus nerka*), Chinook (*Oncorhynchus tshawytscha*), coho (*Oncorhynchus kisutch*), pink (*Oncorhynchus gorbuscha*) and chum (*Oncorhynchus keta*). Since each species exhibits different spawning behaviors, determining which species were consumed helps archaeologists better understand ancient socioeconomic strategies. This project utilizes ancient DNA (aDNA) to identify salmon species variation to test alternative hypotheses about the economics and social impacts of fishing behavior at Housepit54, Bridge River site located in British Columbia. aDNA analysis is conducted on samples of thoracic and atlas vertebrae taken from the sequence of 15 stratigraphic floors, which can be segregated by two occupational periods represented as Bridger River 2 (1600–1300 cal BP) and Bridge River 3 (1300–1000 cal BP).

Frachetti, Michael (Washington University, St. Louis)

[23]

*Discussant***Frachetti, Michael (Washington University, St. Louis)**

[298]

Participation, Choice, and Institutional Change across the Eurasian Bronze Age

Theories of “complex social organization” have long linked institutional formations to increased concentrations

of power, centralization, and inequality. However, for more than a decade, novel models of “non-uniform complexity”—wherein economic, social, ritual, and practical institutions reflect divergent geographic networks from those underpinning political power—have been useful for explaining the rapid and regionally expansive connectivity and innovation that linked urban communities and mobile pastoralists of Inner Asia throughout the Bronze Age. This paper reexamines this model in light of *The Dawn of Everything*, ultimately situating non-uniform complexity within a wider theoretical movement that promotes alternative views of complexity and an archaeological contribution beyond “habitus” and “practice” to link human choices and institutional participation to the formation of complex and extensive connectivity among pre-state populations of Eurasia.

Fragua, Jordan (Picuris Pueblo)

[84]

Discussant

Fraik, Alexandra [87] see Jacobs, Nicholas

France, Christine (Smithsonian Museum Conservation Institute) and Julianne Sarancha (Arizona State University)

[62]

Establishing Longitudinal Regional Origins in East Coast North America Using a Modern Strontium and Sulfur Isoscape in Deer Bones from Virginia

Establishing geographical provenance and life histories of North American colonial individuals is critical for understanding early population movements related to urbanization, immigration, and the changing demographics of an emerging nation. In East Coast North American archaeological studies, oxygen stable isotopes are the primary proxy for regional origin, yet this isotope system is generally limited to latitudinal variation. This study examines bioavailable sulfur and strontium isotopes in Virginia, the source of which is the north-south striking geologic formations in this region. Weathering releases sulfur and strontium into the soil which then propagates up the food chain, a process which functions similarly in both colonial and modern ecosystems. Over 200 modern deer across a 300 km distance are analyzed for sulfur and strontium isotopes in bone collagen and bioapatite, respectively. Preliminary sulfur isotope data shows a 5% shift from coastal to mountainous regions. Pending strontium data will enhance this isoscape and generate a dual-isotope matrix with more nuanced discernment of longitudinal origins and east-west movement. This will be the most comprehensive set of bioavailable sulfur and strontium isotope data for this region. Combined with oxygen isotopes, these new data can provide a more powerful assignment of geographic origins for past individuals.

France, Christine [222] see Martínez-Polanco, María

France, Christine [123] see McGuire, Sara

France, Christine [304] see Rick, Torben

Franchetti, Fernando [178] see Neme, Gustavo

Francis, Kristen (USDA Forest Service) and Michael Terlep (USDA Forest Service)

[283]

Pueblos, Hogans, and Lidar on the Fireline

Fire archaeologists in the US Southwest are at a challenging intersection of increased wildfire severity with dense fuels, high site densities, and often limited cultural resource inventory. The archaeological sites most vulnerable to wildfire effects are those that are unknown and undocumented. This presentation details the applicability of lidar data to identify archaeological resources in time-sensitive emergency response situations. The 2023 Kane Fire on the Kaibab National Forest in northern Arizona provided the opportunity to field-test

the technology amid the fast-paced environment, grueling conditions, and multiple logistical challenges of wildfire incidents.

Franco, Nora (University of Buenos Aires; CONICET) and Luis Borrero (CONICET)
[306]

Small Stemmed Projectile Points, Bow and Arrow, and the Presence of New Human Populations in the Final Late Holocene of South Patagonia

During the Late Holocene, a variety of stemmed projectile points have been recorded in the Atlantic side of central-south Patagonia. Although some of the so-called Fell IV stemmed projectile points may have been part of a bow and arrow weapon system, this is probably not the explanation for the thick so-called Fell IV projectile points. The situation is not so clear for other varieties of these stemmed points. These varieties may have coexisted in some places, like the Magellan Strait. However, in the upper Santa Cruz River Basin there are chronological differences for the deposition of the Fell IV and the smallest varieties of Fell V projectile points. The latter were recorded at the end of the Late Holocene, when other changes in the archaeological landscape were also identified. Genetic information points to the presence of new human populations in the area, suggesting that this is the reason for the introduction of the smallest variety of stemmed projectile points, and the related bow and arrow weapon system.

Franke, Beatrice [6] see Ek, Jerald

Franklin, Jay, Gaylen Tinsley (WestLand Resources Inc.), John Hooper (WestLand Resources Inc.), Christopher Taylor (WestLand Resources Inc.) and Aaron Ollivier (WestLand Resources Inc.)

[335]

Obsidian Procurement, Use, and Assemblage Formation at an Archaic Site in Eastern Arizona

[WITHDRAWN]

Franklin, Lauren (University of Arizona) and Madeline Robinson (University of Sydney)
[197]

Aligning Previous Research with New Methods: Photogrammetry and 3D Artifact Analysis of Tabun Cave, Israel
Tabun Cave, Israel is an iconic Paleolithic site known for its long cultural sequence and its rich and variable artifact assemblages. Historically, Tabun has been studied for nearly a century in many different ways, but we endeavor to apply newer methods to bring our current understanding of the site into alignment with contemporary questions about hominin toolmaking. Here, we report on methods and preliminary results which explore trends in stone tool manufacture and artifact form during the late Lower Paleolithic (LP) Acheulo-Yabrudian (AY) and Middle Paleolithic (MP) Levantine Mousterian (LM) at Tabun. The AY and LM technological systems co-evolved with human behavior and biology over the course of hundreds of thousands of years from the LP to MP. The key to understanding this complex relationship lies in determining which aspects of Paleolithic technology played dynamic roles in large-scale evolutionary patterns, how they interacted, and why.

Franklin (Mack), Stephanie
[267]

Heritage Management and Wildland Fire: A Story of Success on the Comanche Fire

In June of 2023 the Comanche Wildfire began by a lightning strike on the El Rito District of the Carson National Forest in northern New Mexico. Due to the rains and cool temperatures this fire was burning low to moderate allowing the Forest to use the fire beneficially; however, this posed a problem for cultural resources. Cultural resource management during fires is often triage, picking which sites you have time to protect; however, as this fire was burning slowly archaeologists had more time to protect sites. Thanks to preventative fire mitigations, a

prehistoric habitation site and a historic spring box site came out unscathed by fire. Additionally, through the hard work after the fire by wildland fire fighters the site is even more protected from natural events and other impacts in the future. This is a success story for cultural resource management in a wildfire.

Frederick, Kathryn [183] see Kooiman, Susan

Freeman, Jacob (Utah State University)

[107]

Chair

Freeman, Jacob (Utah State University)

[107]

A Simple Model of Long-Term Population Expansion and Recession

Over the last 12,000 years human populations have expanded and transformed critical earth systems. Yet, a key unresolved question in the environmental and social sciences remains: Why did human populations grow and, sometimes, decline in the first place? Our research builds on 20 years of intense archaeological research studying the deep time dynamics of human populations to propose an explanation for the long-term growth and stability of human populations. Innovations in the productive capacity of populations fuels exponential-like growth over thousands of years; however, innovations saturate over time and, often, may leave populations vulnerable to large recessions in their well-being and population density. Empirically, we find a trade-off between changes in land use that increase the production and consumption of carbohydrates that may drive repeated waves of population growth over thousands of years and the susceptibility of populations to large recessions due to delays in the manifestation of competition for resources. These results shed light on the long-term drivers of human population growth and decline.

Freeman, Jacob [107] see Gil, Adolfo

Freeman, Jacob [107] see Jensen, Matthew

Freeman, Jacob [219] see Robinson, Erick

Freestone, Ian [170] see Sefton, Jahleen

Fregel, Rosa (University of La Laguna), Sara Armas-Quintana (University of La Laguna), Clara Díaz-Pérez (University of La Laguna), Javier Serrano (University of La Laguna) and Alejandra Ordóñez (University of Las Palmas de Gran Canaria)

[245]

Slave Trade and Colonialism in African Islands from the Atlantic and the Indian Oceans

One key period of history involved the forced migration of millions of people due to slavery. Information on the origins of the enslaved individuals has been reconstructed from historical records and, more recently, through the use of paleogenomic techniques. However, all these ancient DNA studies have been performed on mainland Americas and the Caribbean, leaving other geographical regions understudied. In this project, we explore the history of slavery and the impact of colonialism in Mauritius and the Canary Islands, where enslaved people were brought during colonial times through the Indian Ocean and the transatlantic slave trade, respectively. For that, we use next-generation sequencing of ancient DNA to estimate the genome-wide ancestries of individuals sampled in the cemeteries of Albion ($n = 8$) and Le Morne ($n = 26$) in Mauritius, and Finca Clavijo ($n =$) and Juan Rejón ($n = 1$) in the Canary Islands. Ancestry inference indicates that individuals from Mauritius had ancestries related to not only mainland Africa and Madagascar but also from Europe and South Asia. For the Canary Islands, enslaved individuals had sub-Saharan African, North African, Middle Eastern, European, and Canarian indigenous ancestries. Our results provide insight into the complex demographic history of Mauritius and the Canary Islands.

Fregel, Rosa [245] see Sikora, Martin

Freiberger, J. Cristina (University of Nevada, Las Vegas)

[211]

Interpreting Burned Commingled Ancestral Remains in the American Southwest

Highly fragmented ancestral remains are found throughout the Ancestral Puebloan region of the American Southwest (AD 800–1700). These human remains are often cut, burned, broken, disarticulated, and commingled. For the last 20 years, the narrative has been that these collections were burned to be eaten (anthropophagy/cannibalism). This narrative fails to include Puebloan ethnography, which discusses fire as a tool of transformation and purification. Burning and ashes serve a critical role in many Pueblo ceremonies and curing rites. There are accounts of fire being used as a purifying act to ritualistically destroy villages and to annihilate the bodies of those accused of witchcraft. This research project embraces the complicated relationship between the victims and those individuals who handled their bodies after death. Violence is never an isolated or meaningless act but intentional, communicative, and culturally meaningful. The act of burning these bodies held a greater cultural meaning than simply burning for consumption. This project brings together bioarchaeological data, ethnographic, and archival resources to reconstruct and contextualize these ancestral remains. Using social theory about body transformation and body agency, a reinterpretation is offered about the nuance of how these commingled bodies were handled.

Freiberger, J. Cristina [211] see Edmonds, Emily R.

Freidel, David (Washington University, St. Louis)

[239]

Discussant

Freidel, David (Washington University, St. Louis) and Juan Carlos Melendez (Archéologie des Amériques UMR 8096–CNRS)

[333]

Magic Soul Containers of the Classic Maya in Archaeological Context

Classic Maya (CE 250–800) texts include a phrase *k'a'ay u sak nikte'*, faded his white flower, as a reference to the ending of the sweet breath of rulers and as a metaphor of their death. The breath—allegory of white flower—is evidently an allusion to soul force. Scholars identified on Tikal Stela 5 a reference for a White Flower Soul Container, which is believed to be a lidded jar used as a receptacle for containing the breath soul. Excavations at the ancient Maya site of Waka' have unveiled white stone and black and brown lidded ceramic jars placed in the tombs of rulers, likely soul containers. At Tikal, two lidded jade mosaic encrusted cylinders found in royal tombs are also identified by the authors of this work as soul containers, and additionally as receptacles for patron maize gods conjured by rulers

Freidel, David [159] see Navarro-Farr, Olivia

Freire, Shannon (University of Wisconsin, Milwaukee)

[330]

Chair

Freire, Shannon [330] see Charles, B

Freire, Shannon [330] see Jones, Catherine

Freiwald, Carolyn (University of Mississippi), John Walden (Harvard University) and Rick Smith (George Mason University)

[295]

Genomic and Isotopic Migration and Kinship among the Classic Maya of Belize

Emerging genomic and isotopic approaches have opened new doors to reconstructing diet, mobility, kinship, demography, and identity in the past and have the potential to transform our understanding of the ancient Maya world. These methods offer ways to reconstruct where people lived, who they were related to, how they organized their communities, what they ate, how they moved around the landscape, and how these dynamics changed over time. However, relatively few studies in Mesoamerica have combined genomic and isotopic approaches and grounded the collective interpretation of these data in archaeological contexts. What if we let archaeology drive what we learn from these emerging data, with collaboration of local communities, and combine all the tools and relationships at our disposal to understand ancient social worlds? We discuss the ongoing state of genomic and isotopic research in the eastern Maya lowlands in Belize and show how community engagement, cutting edge scientific approaches, and traditional archaeological data can enhance one another and contribute to the creation of anthropological models using examples from projects across Belize—from Classic period Caracol in the Vaca Plateau to polities in the Belize Valley such as Lower Dover and Postclassic Santa Rita (Chactemal) in northern Belize.

Freiwald, Carolyn [260] see Boileau, Arianne

French, Jennifer [246] see Nowell, April

French, Katherine (Washington State University), Roman Shiroukhov (ZBSA), John Meadows (ZBSA), Vyacheslav Baranov (National Academy of Sciences of Ukraine) and Richard Madgwick (Cardiff University)

[91]

Pagan-Christian Interactions Eleventh to Thirteenth Centuries CE: The Isotope Evidence

The Balts are generally recognized as the longest persisting pagan-dominated community in temperate Europe, widely practicing until the fourteenth century CE. Historical research documents that trading, raiding, and crusading often brought the Balts into direct contact with Christians in the centuries leading up to their ultimate conversion. This paper presents $^{87}\text{Sr}/^{86}\text{Sr}$, $\delta^{18}\text{O}$, $\delta^{13}\text{C}$, and $\delta^{34}\text{S}$ results demonstrating direct evidence for mobility of pagan groups existing within or economically entwined with their Christian neighbors between the eleventh and thirteenth centuries CE. Horses sacrificed in Balt cemeteries excavated in modern Kaliningrad and Lithuania were sourced across the Baltic Sea from Christian trade partners. Additionally, Kyivan Rus accommodated Baltic migrants buried in a pagan style. These findings establish diverse socioeconomic intermingling not previously documented between pagan and Christian groups at the end of the Long Iron Age.

French, Katherine (Washington State University)

[334]

Chair

Fresh, Samantha [185] see Titelbaum, Anne

Freund, Kyle (Far Western Anthropological Research Group Inc.), Daron Duke (Far Western Anthropological Research Group Inc.), Erin Eichenberg (Tule Springs Fossil Beds National Monument), Lucas Johnson (Far Western Anthropological Research Group Inc.) and David Thomas (American Museum of Natural History)

[41]

Analysis of the Fenley Hunter Obsidian Flake from the Tule Springs Archaeological Site, Las Vegas, NV

This poster concerns the Tule Springs Archaeological Site (79001461/26CK4) in Clark County, Nevada, and new analyses of the obsidian flake discovered there in 1933. The importance of the flake rests in its then-postulated association with the fossil remains of extinct Pleistocene megafauna and the long-term research endeavors that have happened since. Although a direct association with megafauna could never be demonstrated, the flake was found within terminal Pleistocene sediments. Using X-ray fluorescence (XRF) spectrometry, we show that the artifact originated from the Airfield Canyon obsidian outcrops associated with the Obsidian Butte geochemical source in southwestern Nevada, roughly 230 km north of Tule Springs. By contextualizing the current results within the broader spatial patterning of Great Basin toolstone conveyance at the time, we reintroduce Tule Springs as a key site in the study of the earliest occupations of the Desert West.

Freund, Kyle [326] see Duke, Daron

Frie, Adrienne [73] see Haas, Jennifer

Friedl, Lukas [247] see Carvalho, Milena

Friend, Amanda [70] see Maass, Claire

Friend, Tara (Cornerstone Environmental Consulting) and Michael Pitts (Cornerstone Environmental Consulting)
[52]

Occupational History and Site Function at Two Sites within Montezuma Castle National Monument

Arizona's Verde Valley represents a significant archaeological resource and was a prehistoric cultural crossroads. Despite this, the region has been relatively understudied. Archaeological interest and excavation has historically focused on the large pueblos in the region, while smaller habitation and resource processing sites have only received cursory investigations. The last archaeological excavation in the Montezuma Well Unit of Montezuma Castle National Monument was conducted by the National Park Service in the early 1960s. Recent archaeological testing at two sites near Montezuma Well represented a rare opportunity to explore Southern Sinagua occupation and use of the Verde Valley and Montezuma Well area, in particular. The resulting analysis of recovered cultural materials offers a challenge to the previously established occupational history of the area and identifies site functions that have had only limited consideration.

Frierson, Andrew [266] see Helmer, Elliot

Friesen, Max [168] see Dawson, Peter

Frink, Liam [103] see De Cespedes, Manuel

Fristoe, Trevor [219] see Tallavaara, Miikka

Fritz, Gayle (Washington University in St Louis)
[149]

Keeping Up Productivity: Persistence of "Lost" Crops in the Trans-Mississippi South

Most crops in the Eastern Agricultural Complex were no longer members of Native American farming systems when Europeans first took note. Reasons usually proposed for the fall-off entail advantages of maize over the pre-maize cultigens, with heightened defensibility of close, compact fields being another possible factor. Similar to the variability in timing of initial dependency on maize across subregions of eastern North America, later agricultural trajectories differed from subregion to subregion. At sites in the Trans-Mississippi South, evidence exists for continued production of sumpweed and goosefoot—along with sunflower, eastern squash, and of course maize and beans—well into the final decades of pre-European contact and probably later. I discuss possible causes for the persistence of agrobiodiversity in this particular area, where densely populated Native towns were few and sustained European contact was late. This paper salutes the ongoing productivity of Dr. Karen Adams and her contributions to the study of underappreciated crops, maize, and diverse Indigenous food production systems.

Fruhlinger, Jake (Idaho National Guard)

[326]

Discussant

Fry, Megan (University of Florida), Samantha McCrane (University of New Hampshire) and John Krigbaum (University of Florida)

[205]

Childhood Diet, Mobility, and Weaning in the Early Medieval Kingdom of Lindissi

Lindissi is an early medieval kingdom that encompassed the majority of North Lincolnshire, UK. It was independently ruled until roughly the early seventh century when it underwent many years of sociopolitical change before finally being absorbed by Mercia. Here we examine bulk tooth enamel $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ isotopic signatures from six sites in the region to explore dietary and weaning patterns as well as childhood mobility during this turbulent period. Permanent first (0–3 yrs.) and third molars (7–16 yrs.) from 26 adult individuals across sexes that date to between the fourth and eighth centuries were sampled. By comparing and contrasting data from both tooth types, we are able to create snapshots of child life history from early to later childhood. Macpherson (2005) examined enamel from a further four sites in North Lincolnshire which date to between the eighth and twelfth centuries. Comparing our data with their data shows long-term trends in weaning habits across the entirety of the medieval period. Finally, we are able to contrast these data to previously reported bone collagen $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ data for our sample to discuss the complex nature of inter-tissue comparisons and show trends throughout the life-course.

Fryer, Tiffany (University of Michigan)

[258]

Chair

Fryer, Tiffany (University of Michigan) and Alexander Bauer (Queens College; Graduate Center, CUNY)

[258]

Activating Heritage: Introductory Remarks on Substantive and Pragmatic Archaeologies

Drawing on the session co-organizers' experiences, this paper offers reflections on the state of heritage research being conducted by archaeologists, its current limitations, and its potential for greater social impact. Leaning into the notion that heritage does important work in the world, we offer thoughts on how archaeologists can engage in more substantive heritage practices—ones that aim to dismantle systems of oppression and actualize a more just future.

Frykholm, Soren (University of Michigan)**[160]***Engaging and Building Community through Archaeology at Monte Negro, Oaxaca*

Since the 1930s, the community of Monte Negro has played an integral role in the research projects carried out at its namesake archaeological site. Beyond participating in the investigations of visiting scholars, community members have themselves initiated projects to collect and disseminate local knowledge pertaining to their heritage, sought resources for the continued preservation of their archaeological site, and promoted the community as a model for sustainable Indigenous tourism. During a productive conversation with local leadership in 2022, I was able to discuss how a more traditional archaeological research program might intersect with local needs and ambitions. After formalizing a partnership agreement, we began developing initiatives that included developing a children's theater group, petitioning INAH to allow the community to retain archaeological artifacts, enhancing tourism infrastructure, and more. Later, and after several rejected attempts, I secured funding from a public scholarship grant that allowed us to make these aspirations a reality. In this presentation, I will talk about the collaborative relationship and initiatives I have developed with the people of Monte Negro and what implications it might have for foreign archaeologists like me who have a passion for Oaxaca archaeology.

Frykholm, Soren [160] see Chagoya Ayala, Itzel

Frykholm, Soren [160] see Whittington, Stephen

Fu, Yue (Stanford University; CCNU), Na An (Hubei Business College), Xujing Gao (Hubei Provincial Institute of Cultural Relics and Archaeology) and Zi Shi (South-Central Minzu University)**[51]***Food, Rituals, and Beliefs: Multiple Interpretations of Plants unearthed from Tombs of Chu State—The Example of Zanthoxylum bungeanum*

Zanthoxylum bungeanum, a vital component of ancient Chinese culinary life, has been unearthed from many tombs associated with the Chu state. As a prominent funerary offering, it is presumed to hold distinct roles and functions within the burial context. The presence of *Zanthoxylum bungeanum* alongside various fruit remains underscores its multifaceted significance as a food item, serving functions in cooking, seasoning, and alcoholic beverage production. When found in conjunction with cinnabar, it likely played a significant role in shamanistic ritual ceremonies. On one hand, it contributed to the warding off malevolent forces, while on the other hand, it bore connections to the Chu state's religious beliefs regarding soul guidance and convergence. The fragrant aroma of *Zanthoxylum bungeanum* had the capacity to invoke spirits, thus its inclusion in burials could facilitate communication with divine entities. *Zanthoxylum bungeanum*, within Chu culture, served as both a delectable ingredient and an essential element in rituals and beliefs, with its functions and symbolic meanings permeating various facets of ancient Chu civilization, reflecting the profound understanding and reverence of the natural world and the spiritual realm by the Chu people.

Fukuhara, Hironori [273] see Murakami, Tatsuya

Fulkerson, Tiffany (Spokane Falls Community College; Washington State University)**[87]***Chair***Fulkerson, Tiffany (Spokane Falls Community College; Washington State University) and Shannon Tushingam (California Academy of Sciences)****[87]***Cultural Continuity and Persistence in Upland Ecologies: Insights from a Field School in Indigenous Collaboration, Landscapes, and Heritage Management*

Growth in cultural and environmental compliance industries highlights a need to train early career professionals in collaborative approaches to heritage management that consider both the interrelatedness of cultural and natural resources across diverse habitats, and the expressed interests and goals of the communities who maintain long-standing connections to managed lands. Here, we present ongoing research as part of a field school in the Okanogan Highlands of north-central Washington state, in the homeland of the Okanogan people, that was developed to address this need. The field school is aimed at exploring the continuity of culture and place and connections between community, landscapes, and ancestral foods in upland environments through time. It was developed in partnership with the Confederated Tribes of the Colville Reservation, Bureau of Land Management, and academic institutions and provides a unique opportunity to train early career professionals in collaborative heritage management practices in diverse upland ecologies. The field school was designed to improve accessibility to field training opportunities and teaches field methods applicable to careers in CRM and related industries. Specialized analytical techniques (aDNA, paleoethnobotany, zooarchaeology, drone/lidar, pXRF) are used to explore enduring connections to the land and how they articulate with food sovereignty and community health.

Fuller, Dorian [217] see Castillo, Cristina

Fuller, Dorian [51] see You, Yawei

Fuller, Nicole (Florida Museum of Natural History, University of Florida)

[280]

Discussant

Fuller, Nicole [318] see Green, Jennifer

Fulmer, Noah

[197]

In-Field Photogrammetry

The proposed poster would present an overview of photogrammetry applications for archaeology both during active fieldwork and interpretive analysis. This will include case studies of photogrammetry use in the field at the Trauston Castle site excavation in Austria and at Madam John's Legacy in New Orleans, LA, in which a field methodology was developed for quick in field scans and rapid processing. The overview will cover equipment, methodology, and outcomes for the projects, including visuals of photographs, the 3D scans, and tactile 3D prints of the site features. The presentation would also include the results of artifact scanning completed for collection samples of the Guste Homes public housing development project in New Orleans, LA.

Fulton, Kara (University of North Texas)

[45]

Using Social Annotation to Improve Student's Transferable Skills in an Online Archaeology Course

Many universities are interested in developing students' transferable skills—those focused on the ability to do something (e.g., think critically), as opposed to content-based or discipline-specific knowledge. In a world where the average person changes careers 5–7 times, transferable skills are becoming increasingly important to help leverage career options. However, transferable skill development has become more difficult in the post pandemic world in part due to decreased student engagement. Incorporating social annotation into coursework is one way of not only increasing student engagement, but also developing transferable skills—some of the top qualities today's employers seek in new hires. Social annotation takes the traditionally solitary activity of reading texts, viewing videos, and examining course material and transforms it into a collaborative activity, usually in an online space. Students highlight, comment, and discuss questions about course material while learning from (and with) each other. This study explores transferable skills within the

context of social annotation by analyzing data from a large enrollment (140+ students) asynchronous online, undergraduate, general education introductory archaeology course. I compare sections that incorporated social annotation into coursework with those that did not. I investigate student perceptions about their own skills and examine assessment data measuring these skills.

Furholt, Martin (Kiel University)

[298]

Politics and Possibilities in Prehistoric Europe: An Alternative View on Power and Wealth

An overarching idea of *The Dawn of Everything* is that archaeologists should be encouraged to explore the past as a world of possibilities, not the least with regard to social and political organization. Taking up this call, this paper will reexamine two of the main conceptual premises underlying most models of social organization and evolution in prehistory: current Western notions of Power and Wealth. These are fundamentally skewed toward an individualist, exclusive, competitive, and confrontative view of what is considered as “human nature” and thus create an unjustified Eurocentric bias toward such kinds of motivations and forms of behavior, downplaying and neglecting collective, cooperative, and caring practices. As anthropological work has shown that coercive force is largely to be considered as absent in non-state societies, reevaluating power and property relations as mainly collective, consensus-based forces, and differentiating different forms of wealth, it is argued that these concepts mainly work from the bottom up, downplaying the dominant focus on top-down, leadership-based agency. This new conceptual framework enables us to understand the seemingly contradictory evidence in European prehistory, where inequality in relational wealth is often found in burials but is not matched by inequality showing up in the domestic sphere.

Futty, James, Jr. [262] see Wriston, Teresa

Fyles, Madeleine

[30]

Wooden Posts and an Ontology of “Treeneess”

Wooden posts have been a critical element of Andean architecture within the Jequetepeque valley on the north coast of Peru, particularly in the Moche site of Huaca Colorada (AD 650–850). However, wooden posts have frequently been interpreted in the archaeological canon as architectural features with little connection to ritual procedures except in their inclusion as an inert element of ritual architecture. Utilizing new analyses of wooden posts made from the algarrobo tree (*Prosopis pallida*), this paper identifies trends in the use and recycling of wooden posts at Huaca Colorada during the Middle Horizon, shedding light on the role of the algarrobo tree as more than a simple resource by examining how the algarrobo tree may have participated in the ritual, political, and social structures at Huaca Colorada as distinct persons within the local ontology. This paper explores the use and perception of algarrobo trees within the complex of Huaca Colorada and the role of trees in establishing or promoting culturally specific perceptions of place, ancestry, and memory.

Gabelmann, Olga (Bonn University, Germany) and Karoline Noack (Bonn University, Germany)

[193]

Inka Dynamics in the Cochabamba Valley

After expansion from Cuzco, the Inca introduced a statecraft model based principally on the mobilization of numerous population groups across longer and shorter distances. In this sense, the Inca Empire can be conceptualized as a “mobile state” that was to last for only 80–100 years (AD 1445–1538). Inca influence in the area of Bolivia was moderate until the reign of Huayna Capac (AD 1491–1527), when it experienced massive population replacements through the colonization of 14,000 mitimaes to work on the Inca state fields in Cochabamba. The original population groups were sent to the eastern borders. The principal interest

of the state was the fertile valley bottom and the production of surplus and staple food for further conquests. The valley played a highly important role in the organization of the empire. The role of the productive and reproductive reorganization of the Cochabamba valley, the implementation of new forms of production and its techniques as well as transformations in land ownership and dependency have not yet been thoroughly studied. The project uses interdisciplinary methods (GIS, surveys combined with ethnohistorical research) to elucidate Inca production methods and mobilization as a governmental strategy with its different forms of dependency.

Gabriel, Sonia [268] see Faber, Sarah

Gaddis, Katherine [80] see Slusarska, Katarzyna

Gaffney, Dylan [289] see Utting, Benjamin

Gaggioli, Amanda (University of Memphis)

[328]

Discussant

[328]

Chair

Gaggioli, Amanda (University of Memphis)

[328]

Toward a Social Geoarchaeology of Aegean Burial and Ritual at Eleon, Greece

In recent years, geoarchaeological and soil micromorphological analyses have aided in reconstructing the complex histories of funerary burial and ritual in the Mediterranean. For the Eastern Boeotia Archaeological Project in Greece, geoarchaeological work has investigated a burial complex at the site of Eleon dating to the late Middle Helladic to Late Helladic I period (ca. 1600–1450 BCE). Investigations targeted areas within a large chamber tomb and a low tumulus that monumentalized an extensive burial complex. Soil micromorphology made known building materials and techniques and episodes in the construction and multigenerational use of the tombs and tumulus and the taphonomic and pedogenic processes that altered their preservation. Further analyses comparing the burial monument with constructions of the surrounding settlement reveal a long tradition of building skills and knowledge of material properties and their variable applications to create new types of monuments. Only a few studies in geoarchaeology have been conducted on tumuli and related mound-type structures, and most have concerned contexts in the Americas. Therefore, this work at Eleon provides methodological advancements in applications of geoarchaeology and soil micromorphology in a new context and comparative material for understanding sociocultural processes of monumental and multigenerational burial and ritual across time and space.

Gagnon, Celeste Marie [53] see Torres Morales, Genesis

Gaignerot-Driessen, Florence [113] see Fallu, Daniel

Gaikwad, Nilesh [83] see King, Adam

Gaitán Ammann, Felipe [47] see Wesp, Julie

Galán, José Manuel [198] see Torras Freixa, Maria

Galaty, Michael (University of Michigan)

[17]

Discussant

Galfi, Jovan [162] see Belmiro, Joana

Galindo, Anabel [88] see Hoerig, Karl

Gallaga, Emiliano (UNICACH)

[109]

Chair

Gallaga, Emiliano (UNICACH)

[109]

Mirrors, a Mean to Look into Cultures

No matter what material they were made of, stone, metal, or crystal, or if it was cheap or expensive (gold, silver, copper, bronze, obsidian, or pyrite), mirrors are one of the most fascinating artifacts made by artisans in the past. The users of these items were normally high-class members of society (political figures, high military members, merchants, holy men, or priests), and due to their complex manufacture, they were not easy or cheap to get their hands on them. Mirrors were considered a high-status item and used as a commodity for commercial, ceremonial, and even political performances. Mirror studies have gained a lot of attention lately in order to understand how they were made, who used them, how they used them, and/or what they mean for holders.

Gallaga, Emiliano [217] see Chiou, Katherine

Gallaga, Emiliano [109] see Lowe, Lynne

Galland, Noémie (ULB)

[158]

Marine Species and Sea-Related Representations in Ninth- to Fourteenth-Century Casma Iconography on the North-Central Coast of Peru

Recent archaeological work has revealed that the north-central coastal region of Peru had been the territory of a cultural entity that we recognize today as “Casma” between the ninth and fourteenth centuries AD. Some aspects of this culture remain largely unknown and require further investigation, particularly its iconography. It appears mainly on molded ceramics, ornamented by anthropomorphic and zoomorphic motifs, as well as scenes that can also occur on painted textiles. As in other coastal cultures, this abundant iconographic repertoire includes notably representations related to the sea and the coastal environment. Various animals such as seabirds, fish (including rays), and other marine species are sometimes depicted alone, sometimes in maritime scenes like navigation and/or fishing, but also in other compositions—especially featuring a front-facing anthropomorphic character generally considered as the main Casma deity. Identifying the recurring figures, their features, and occurrences in scenes allows us to better understand the importance of sea-related representations in Casma ideology, and more broadly the interactions of this coastal culture with its environment.

Gallareta Cervera, Tomás (Kenyon College), George Bey III (Millsaps College) and Rossana May (Kaxil Kiuic A.C.)

[261]

Re-dissecting an Old Friend: Looking Back at the Evidence of Kiuic's First Court

From 2007 to 2016, a team of archaeologists under the direction of George J. Bey III excavated Structure NI065E1025, a pyramid temple dated to the Terminal Classic period and located at the Yaxché group in the heart of the archaeological site of Kiuic, Yucatán. The structure had a complex construction history that started around 800 BC and concluded at about AD 900 when the site was periodically depopulated. NI065E1025 underwent significant renovations and changes over a thousand years. In the Late Classic period, the Yaxché group served as the location of Kiuic's court at its most expansive configuration. During the Terminal Classic period, NI065E1025 was transformed into a towering temple that stood at a height of 12 m with a masonry room and a stone bench on its top. Our previous papers discussed how the Yaxché group exemplifies the traditional Puuc Courts, defined by their religious, administrative, and residential spaces. In this paper, I revisit the evidence and critically assess how it aligns with our current understanding of Royal Courts in the Puuc region and the origins of the Late Terminal Classic authority of its urban centers.

Gallareta Negrón, Tomás (INAH Mexico), Leslie Cecil (Stephen F. Austin State University) and George Bey III (Millsaps College)

[255]

Landa's Auto de Fe and the Destruction of the "Idols" of Mani: Petrographic and Chemical Analysis from Mani, Mexico

In 2015, an archaeological rescue program was carried out in Mani, Yucatán, related to improvements in the main square with the aim of designating Mani as a "magical town." The excavations produced 568 fragments of the "idols" destroyed during the so-called auto de fe organized by Diego de Landa in Mani (1562), punishing the Maya population for continued pagan practices. This presentation offers details of this uniquely important historical event and provides an analysis for the first time of the archaeological evidence of what happened at Mani. Landa gathered the idols from the entire region (Yucatán); in fact, Scholes and Adams noted (1938) that he gathered both local idols and those from as far away as the Cobá region. The incensarios identified in the excavations are of the Late Postclassic and contact period type (AD 1000–1500) classified as Chen Mul modeled. Forty Chen Mul fragments were analyzed by INAA and petrographic analysis and the different chemical groups were compared to similar Postclassic pottery and clays from Mayapán, Santa Rita Corozal, Laguna de On, and the Petén Lakes region to determine the place of origin of the destroyed incensarios. The petrographic analysis will help test the historical hypothesis regarding the various incensarios collected.

Gallareta Negrón, Tomás [261] see Bey, George III

Gallareta Negrón, Tomás [261] see May, Rossana

Gallareta Negrón, Tomás [261] see Seligson, Ken

Galle, Jillian (Digital Archaeological Archive of Comparative Slavery) and Khadene Harris (Kenyon College)

[82]

Labor Coercion, Land Access, and Free Markets after Emancipation in the American Southeast and Caribbean

The use of theory and related models that explicitly lay out the causal processes that we hypothesize operated in the past to generate patterns archaeological data is a rarity in historical archaeology. It is especially hard to find examples of research that create or use models that are then tested using archaeological data. The Digital Archaeological Archive of Comparative Slavery (DAACS) works to encourage the application of theory to the dozens of archaeological sites and millions of artifacts from sites of enslavement across North America and Caribbean that are freely available through DAACS. Here we use a model of coercive labor and open markets to understand settlement patterns of newly freed enslaved laborers in the American Southeast after 1865, and on the islands of Dominica, Jamaica, Nevis, and Barbados after 1834. We track the use and discard of material culture throughout the nineteenth century in both

regions. The results demonstrate that access to abundant and fertile land and free markets away from “home” plantations afforded greater opportunities and higher wages to newly freed laborers than those with restricted access to environmental resources.

Galle, Jillian [89] see Bollwerk, Elizabeth

Galleani, Diego [77] see Moreno-Meynard, Paulo

Gallivan, Martin [229] see Napora, Katharine

Gallo, Emily [105] see Gray, D. Ryan

Galoso, Robin (SEARCH Inc.) and Taryn Johnson (Texas A&M University)
[99]

La Tortuga: The Last Texas-Built Laguna Madre Scow Sloop

Since first appearing on sixteenth-century Spanish exploration maps, Texas’s 5,405.8 km coastline was famous for difficult navigation. The coast’s low-lying, monotonous nature, shallow lagoons, changing river mouths, and shifting sandbars made it treacherous, especially for deep drafted vessels. Spain’s focus on internal infrastructure and mercantilism meant that by the time Texas was annexed as a state the coast remained undeveloped. By the nineteenth century, the people of Texas adapted to this challenging littoral zone by constructing two types of working vessels well-suited to the environment: the Laguna Madre Scow Sloop and the Gulf Scow Schooner. While Gulf Scow Schooners were abundant west of New Orleans and throughout the coast of the Gulf of Mexico, Laguna Madre Scow Sloops were unique to the southern Texas coast. We focus on the last remaining Laguna Madre Scow Sloop (*La Tortuga*) and its construction process to give insight into the assembly of one of the most prolific nineteenth- to mid-twentieth-century south Texas fishing vessels. This construction process was replicated utilizing historical images, conversations with individuals associated with vessels maintenance, and several physical investigations of the vessel and resulted updated ship construction plans.

Galvan, Melissa (Tulane University), William Ringle (Davidson College) and Rossana May (Kaxil Kiuic AC)
[261]

Middle Preclassic Constructed Landscape in the Puuc Region, Yucatán

In the last decade, lidar-supported surveys and excavations at different sites within the Puuc region in Yucatán revealed an intense and complex early occupation driven by highly productive soils and attested to by a dense network of monumental construction. Our ongoing research indicates that monumental construction began as early as the Middle Preclassic period and that these architectural spaces were the foci for some of the first public gatherings in the Puuc area. The similarity of these buildings suggests a regional tradition of civic architecture differing from monumental construction elsewhere in northern Yucatan; one possible interpretation is that they served as regional equivalents to E-groups elsewhere. Notably, several Middle Preclassic sites of different sizes have been identified. Even though we haven’t recognized a clear hierarchy of settlement organization during this time, this information leads us to question the social and political implications of the existence of these distinctions. In this paper, we present an archaeological overview of the Middle Preclassic constructed landscape, comprising sites within the Santa Elena Valley and the Bolonchen District. Our findings offer an opportunity to explore the early social and political networks of the Puuc region and its interaction with the remainder of the Northern Maya Lowlands.

Galvan, Melissa [261] see Ringle, William

Galván, Miguel Ángel [239] see Robles García, Nelly

Gamble, Erin (University of Washington)

[186]

Chair

Gamble, Erin (University of Washington)

[186]

The Practice of Pottery Production and Trade in Prehistoric Communities from Northern Hokkaido, Japan

This research is framed as a counter to settler-colonial narratives that treat indigenous communities as passive recipients of capitalist commodities expansion. Instead, I emphasize the agency of Indigenous people to resist and the unique colonial configurations that resulted from these acts of resistance. This research focuses on the prehistoric ancestors of the Ainu, Japan's northern Indigenous peoples. Current discourse draws stark lines between the historic period and the prehistoric period, denying the continuity and sovereignty of the Ainu people. I argue that the earlier prehistoric processes studied here shaped later entanglements between Ainu and Japanese colonial powers. Such a perspective more accurately reflects the broader regional history of trade and interconnectedness, and the Hokkaido Ainu's own narrative of the past. Drawing on the concepts of practice, resilience, and risk-mitigation, I examine the relationship between the initial introduction of commodities trade and culture change in precolonial foraging societies on in Northern Hokkaido, Japan. I analyze geochemical and morphological data of ceramic sherds to interpret the social aspects of pottery production in prehistoric communities, illuminating how communities become intertwined with broader world systems by transitioning from local subsistence-based economies to interconnected political economies and distant trade networks.

Gamboa-Mendoza, Julián [118] see Campos Quintero, Lina

Gambrell, Natasha [134] see Balanzategui, Daniela

Ganas, Katherine (City of St. Augustine Archaeology)

[312]

The Case for Shipwreck Material Culture Studies: Identifying Sixteenth-Century Spanish Provisioning Patterns Using Ceramic Analysis from the Emanuel Point II Shipwreck

Archaeological research related to Tristán de Luna's 1559–1561 colonization attempt has produced new insights into early colonial Spanish culture as well as broader realizations applicable to the whole field. One such avenue of research focuses on the analysis of material culture pertaining to both the terrestrial settlement and also, the shipwrecks associated with the expedition. Shipwreck-based material culture studies are integral into understanding the nature of the life and culture aboard transatlantic vessels in the sixteenth century. This paper discusses the results of a detailed analysis of the ceramic material culture recovered from the Emanuel Point II (EPII) shipwreck, specifically how it pertains to the provisioning of galley equipment on oceanic voyages. Additionally, it argues that shipboard galley equipment represents a wide range of functional vessel types, including wooden, metal, and ceramic containers.

Gao, Xujing [51] see Fu, Yue

Garay Herrera, Alejandro (Universität Bonn)

[291]

The Maya Mountain Altars of Northwestern Guatemala

Among the Maya of northwestern Guatemala, modern populations continue to use the mountains found in their territories as places of worship. Often altars are located directly on the peaks of hills and mountains, while in other cases they are found on pilgrimage routes in or around these high sacred points, such as on the mountains from which corn appears in different myths or on those where other supernatural events took place. In some cases, these spaces are marked by archaeological sites that crown the hills, which at times appear to be defensive constructions that can be dated to the Postclassic period (1000–1550 CE). This paper will present a system of classifications and characteristics of these ritual centers, which represent the living traditions of contemporary Maya, particularly among the Jakaltekos, Akatekos, Q'anjob'ales, and Chuj from the department of Huehuetenango, in Guatemala.

Garay-Vazquez, J. Julian (University of Exeter)

[217]

Chair

Garay-Vazquez, J. Julian (University of Exeter), Gaspar Morcote Rios (Universidad Nacional de Colombia, Bogotá), Francisco Javier Aceituno (Universidad de Antioquia, Medellín), Mark Robinson (University of Exeter) and Jose Iriarte (University of Exeter)

[217]

The Origins of Amazonian Cuisine: Archaeobotanical Study of Hunter-Gatherer Subsistence Systems in Limoncillos, Colombia

Previously, it was thought that Amazonian Rainforests presented a barrier for the early colonists of the South American continent. Moreover, these environments were regarded as having few sources of calories and were not inhabited until food production systems were established by humans elsewhere. Recent archaeobotanical studies within NW SA have demonstrated that palms (Aceraceae family) played a central role in hunter-gatherer subsistence systems during the Pleistocene-Holocene transition. Palm resources within Amazonian contexts in Colombia seem to persist well into the late Holocene. Therefore, the present paper presents new archaeobotanical findings from the site of Limoncillos in San Jose del Guaviare, Colombia. The site spans the arrival of humans to the Colombian Amazon up to the very recent past. Palm resources dominate the assemblage early on, but there is a shift toward diverse forest environments toward the mid to late Holocene. scanning electron microscopy analysis on charred multicomponent plant aggregates from the site attests to some of the earliest meal preparations to be studied so far in the Amazonian part of Colombia. Lastly, observations of contemporary hunter-gatherer groups from the Colombian Amazon allowed to identify from the archaeological record what possibly enabled humans to colonize these spaces with a palm-centric subsistence system.

Garber, James [251] see Houk, Brett

Garcia, Cate [173] see Puryear, Iris

Garcia, Isabella (University of Illinois, Urbana-Champaign)

[282]

Under the Lens: A Preliminary Approach to De-“Objectifying” Bone Implements

Advances in archaeological microwear analysis provide new tools to examine bone “objects” created and used by past peoples. Nondestructive microscopy techniques can be employed to study bone objects, preserving the integrity of archaeological materials and minding stakeholder concerns regarding destructive analyses. This poster presents preliminary results from the study of experimentally created and archaeological bone objects using nondestructive microscopy. Employing an AxioZoom v16 stereoscope and a Zeiss LSM 710 confocal microscope, this preliminary research examines the value of traditional classifications of bone objects and interrogates our understanding of their role as both tools and “actors” in their relationships with people.

Garcia, Jon [177] see Watt, David

Garcia, Magdalena (Universidad de Tarapacá), Luca Sitzia (Universidad de Tarapacá), Adrian Oyaneder (University of Exeter) and Manuel Prieto (Universidad de Tarapacá)
[242]

Riego de bofedales y formas de construcción de un paisaje pastoril de origen prehispánico, Andes centro sur
Distintos factores han llevado a conceptualizar el altiplano como un espacio hostil y deshumanizado, y el pastoreo de camélidos como una forma única de subsistencia en este ambiente “extremo”. Desde esta óptica, se ha promovido que los pastores andinos aprovechan los pastos que crecen aquí naturalmente sin intervenir en su crecimiento y maduración. Este enfoque se alimenta también por la baja visibilidad que generalmente posee la cultura material asociada al pastoreo. Para descentrar esta mirada, planteamos que las prácticas de manejo y cuidado de la naturaleza por parte de los pastores, especialmente de los bofedales, implican intervenciones importantes de los paisajes hídricos y vegetacionales, por medio de prácticas colectivas que acondicionan, potencian e incluso crean naturaleza con fines ganaderos. Presentamos los casos de Surire, Mulluri y Parcohaylla (Chile), donde realizamos prospecciones arqueológicas, estudios geoarqueológicos, DEM y de percepción remota, para caracterizar las arquitecturas hidráulicas en uso y en desuso, y evaluar el rol de estas intervenciones en el paisaje pastoril. Cuestionar la visión colonialista de los bofedales, implica desnaturalizarlos y comprender que la agencia de los pastores y sus tecnologías ancestrales son fundamentales para conservar los ecosistemas en los Andes, dentro del contexto actual de deterioro ambiental y crisis hídrica.

Garcia, Patricia (Agua Caliente Band of Cahuilla Indians)
[182]

Discussant

García, Percy [81] see Cusicanqui, Solsire

Garcia-Albarido Guede, Francisco [119] see Sitzia, Luca

García-Alonso, Lilian [114] see Ibarra, Thania

Garcia-Casas, David (Instituto de Ciencias del Patrimonio [INCIPIT], CSIC)
[151]

The Archaeology of Pastoral Landscapes in Mountain Areas of the Central Pyrenees and North of Spain
Seasonal pastoralism is a livestock strategy that shaped Mediterranean landscapes since ancient times. The recent development of archaeological research in mountain chains of southwest Europe has provided us with new data and interpretative models to study the livestock practices starting from their prehistoric origins. This paper focuses on ancient shepherds' occupations in an upland area of the Central Pyrenees. The research used the data collected in fieldworks carried on by the High Mountain Archaeology Group (Autonomous University of Barcelona) and ethno-archaeological approaches based on modern transhumant shepherds. The archaeological remains of huts, enclosures, rockshelters, and other architectural structures have been analyzed in order to develop a typological classification and chrono-functional interpretations. In addition, GIS analyses has been performed to know the settlement patterns of pastoral archaeological sites and their relationship with social and biological features of mountain spaces. The results show several changes in livestock strategies in a long-term sequence from late Neolithic to the twentieth century as well as continuities and discontinuities in the human shaping of the Pyrenean landscapes. Finally, the paper aims to discuss my current research on the archaeology of pastoral landscapes in other zones of northern Spain situated at low altitudinal levels.

García-Contreras, Guillermo [22] see Pluskowski, Aleks

García-Des Lauriers, Claudia (California State Polytechnic University, Pomona)

[291]

Tlaloc, Ritual Economy, and Interaction: A View from Los Horcones, Chiapas

Located on the Pacific coast of Chiapas, the Early Classic site of Los Horcones is known for being an important gateway community where goods and ideas are distributed. Teotihuacano merchants established a strong presence that included exchanges of commodities and ideas. In this presentation, I would like to look more closely at the intertwined relationship of economic exchanges and ritual practices and how these might have served to help establish and maintain long-distance relationships. At the center of these relationships is Tlaloc, the Central Mexican deity along with a larger sacred mountain complex. Los Horcones' location on Cerro Bernal, a mountain that is not only strategically located but also deeply sacred and reminiscent of Tlalocan, may have served to reinforce some of these ritual economic principles on the Pacific coast of Chiapas. This ritual economy with a Teotihuacan origin served to support local authority and expand economic networks into the SE Maya region.

García González, Bruno [106] see Ramos Osnaya, Carmen

García-Granero Fos, Juan José [194] see Hernández-Grajales, Meztli

García Hernández, Melina (Middle Usumacinta Archaeological Project), Takeshi Inomata (University of Arizona) and Daniela Triadan (University of Arizona)

[125]

Excavations at Aguada Fénix E-Group

Aguada Fénix is a major ceremonial complex from the Middle Formative Usumacinta (MFU) assemblage that was discovered in Tabasco, Mexico, through lidar technology. The construction of this complex indicates the importance of communal labor, and there is no evidence of clear social inequality. The MFU features an E-Group in the central plaza. The Aguada Fénix E-Group, a La Venta Type, had two pyramids located to the west and the East platform measuring 400 m. Excavations on the E-Group Plaza began in 2018, but until 2020 evidence of ritual activities related to the central axis has been found, including offerings that contain green stone artifacts and ceramics similar to those found at other Middle Preclassic contemporary sites. Interestingly, recent evidence suggests that the people who deposited these offerings did not have access to green stone before La Venta had interregional influence. However, they shared cosmological concepts with other regions like quadriform motives and water cults.

García Hurtado, María Fernanda [69] see Buckley, Gina

García Lopez, Carmen (Centro INAH Michoacán), José Luis Punzo Díaz (Centro INAH Michoacán) and Fernanda Navarro Sandoval (Centro INAH Michoacán)

[106]

Lidar and DepthmapX: Spatial Analysis of the Archaeological Site Malpaís de Tacámbaro, La Garita Sector

In the municipality of Tacámbaro, Michoacán, is located the archaeological site Malpaís de Tacámbaro, La Garita sector. It is an arm of lava spill where the presence of prehispanic structures that seem to be part of the first urban centers of the Middle Postclassic (AD 1200–1350) stands out. According to the *Relación de Michoacán*, it is known that between AD 1400 and 1450, Tacámbaro was conquered by the Uacúsechas who governed Tzintzuntzan; little is known about the population prior to the conquest by the Tarascans. Since it is located in the Malpaís, the La Garita sector has a high degree of architectural preservation, so it has been

possible to generate a plan of the structures, identifying three main types: quadrangular, circular, and special. In the specific case of the quadrangular plan structures (mainly), they have been related to housing units, so the use of the agent simulator offered by the DepthmapX software was proposed in order to begin the characterization of the term *quahta* (house) on which the political, social, and territorial relations throughout Michoacán are based.

García Mollinedo, Miguel (Tulane University)

[125]

Preclassic Standardized Complexes in the Middle Usumacinta Region

In the Middle Usumacinta region, located in southeastern Mexico, multiple standardized architectural complexes dated from the Middle Preclassic (1000–00 BC) have been detected with the use of lidar technology. Of these complexes, three belong to the Middle Formative Chiapas (MFC) pattern, at least 89 have been classified into the Middle Formative Usumacinta (MFU) pattern, and 59 more could be associated with this pattern. The degree of architectural standardization, the differences in proportions, and the spatial distribution of the complexes suggest that during the Middle Preclassic, a phenomenon of political and ideological integration was gestated in the region. Regional settlement pattern data was analyzed using analytical tools in geographic information systems (GIS) and digital elevation models (DEM) created from lidar data. This study consisted of the analysis of the distribution of the standardized complexes, their proximity to water bodies, and their correlation with geomorphological units. Subsequently, different GIS analyses were used to classify the complexes into archaeological sites. This classification served to propose a rank-size site hierarchy based on the area of the plazas and the volumes of the structures. Finally, this rank-size proposal was used to perform several spatial analyses, such as territoriality, mobility, visibility, and subsistence.

Garcia-Piquer, Albert (Autonomous University of Barcelona), Susana Morano (University of Magallanes), Jorge Gibbons (University of Magallanes), Nelson Aguilera (Autonomous University of Barcelona) and Alfredo Prieto (Fundación Prisma Austral)

[158]

Underwater and Abovewater: Archaeology and Ethnography of Underwater Gathering and Diving Practices along the Coast of Southernmost South America

The coasts of the Fuego-Andean-Patagonian archipelago, south of Chiloé Island, have a length of over 80,000 km and roughly comprise three distinct areas: the Chonos archipelago, the western channels, and the Fuegian channels. The underwater world of this archipelago as a whole must have been a rich and coveted treasure. The ethnographic record provides some specific descriptions and portraits of Indigenous diving practices in historical times. Ethnographers mention that Kawésqar divers were able to reach even 8 m deep when gathering underwater resources. However, from these descriptions, the economic (and social?) importance of diving seems to change depending on the societies, apparently following a north-south gradient. In archaeology, there is little clear evidence of diving practices, but it is worth paying attention to it as its appearance opens up a whole new, submerged reality, perhaps experienced by only a few members of the group. Gathering activities, above- and underwater, would have involved very different techniques with their own tools, maritime species, and subsequent human pathologies. Through a multidisciplinary approach encompassing archaeology, ethnohistory, bioanthropology, and marine biology, our work is a review of the subject involving Indigenous diving practices and underwater resources.

Garcia-Putnam, Alex (University of New Hampshire), Guy Tasa (Washington State Department of Archaeology and Historic Preservation) and Jackie Berger (Washington State Department of Archaeology and Historic Preservation)

[300]

The Illicit Sale of Human Skeletal Remains in Washington State: Where the Law Stands Now and Insights for Future Protections

Washington State has one of the most progressive sets of laws in the United States governing jurisdiction and

process surrounding the discovery and investigation of human skeletal remains. The law dictates how human skeletal remains—both forensic and archaeological/historic—are handled, and by whom, from discovery to disposition. One substantial gap in the law is the sale within the state of human skeletal remains. Because the initial jurisdiction falls to the individual counties, the lack of an explicit law necessitating their investigation has resulted in mixed application of the existing law. Here, we present case studies from Washington that illustrate these types of occurrences, how individual counties have handled them, present legal arguments under the existing law requiring their investigation and suggest more explicit changes to the existing law to clarify the issue. Through this research we hope to illuminate this problem and bring it to the attention of the archaeological community as well as lawmakers who may have similar gaps in their state laws.

García Reyna, Ricardo (Escuela Nacional de Antropología e Historia)

[290]

Tzintzuntzan Archaeological Site: An Approximation to Its Astronomical Orientations

This presentation focuses on the astronomical orientations at the Tzintzuntzan archaeological site. This research progress presents our data from fieldwork: firstly, the measurements of azimuth and elevation from architecture alignments; second, the process of date calculation; and third, the hypothetical reconstruction of a horizon calendar. In addition, we present a photographic record of the sunset on dates marked by orientation alignments. Finally, we present the relationship between these dates and orientations alignment with the process of maize farming in the study area.

García Sanjuán, Leonardo (University of Sevilla) and Francisco Sánchez Díaz (University of Sevilla)

[155]

From Topography to Temporality at the Valencina Copper Age Mega-site (Spain): Low-Density Settlement, Gathering Place, or Both?

In the last two decades, mega-sites have become a defining feature in the research of Copper Age Iberia, opening up completely new avenues for the analysis of early social complexity in this region. One of the most fascinating cases is the Valencina de la Concepción-Castilleja de Guzmán site (Valencina, for short), located in the lower Guadalquivir River valley, Sevilla province (Spain). Recent research has shown this site, occupied between ca. 3200 and 2300 cal BC, to spread over ca. 450 ha and has revealed the scale and diversity of its monuments, which include, among others, gigantic ditched systems and well as tholos-type megaliths. Some newly discovered megalithic graves, like Montelirio and Structure 10.042-10.049, accommodated high-ranking individuals accompanied with material culture made on foreign raw materials and worked with accomplished technical skill. In this paper, we will use various cartographic sources to examine the topography of the site, coupled with the chronometric evidence currently available (which includes almost 300 radiocarbon dates). Our aim is to achieve a preliminary assessment of the reasons why Valencina spread over such a large area, and what its character was: low-density settlement, gathering place, or both?

Gardner, A. Dudley (Western Anthropological and Archaeological Research Institute)

[96]

Archaeological Surveys and Environmental Change: Mongolia and Montana Comparisons

Over the last 20 years extensive pedestrian surveys have been conducted along the Targavatai and Burgastai Valleys in northern Mongolia and in Weatherman Draw in south central Montana. What is clear, in both cases, is that the land surfaces of these areas have been greatly altered by changes in precipitation and soil depositional patterns. In both locations site visibility has either been increased due to erosion or disappeared as cultural materials are covered with recently deposited wind or water born sediments. This presentation takes a comparative look at these two different localities and demonstrates how new soil depositional processes have affected archaeological sites in both areas.

Gardner, Chelsea (Acadia University) and Christine Johnston (Western Washington University)**[173]***Digital Media and Online Resources in Ancient Mediterranean Teaching: Current Practices and Future Opportunities*

This poster presents the results of a 2021–2022 survey examining current uses of digital media and resources in teaching the cultures of the ancient Mediterranean, West Asia, and North Africa. For this study, digital media were defined as mass-communication products in different digital formats (videos, podcasts, blogs, etc.), while digital resources included data repositories (archives, databases, online collections, etc.), and interactive digital tools. The survey was circulated among teaching professionals in schools, museums, and other educational environments, and comprised quantitative and qualitative questions about current pedagogical practices in fields related to Ancient Mediterranean Studies, including archaeology. This poster presents the survey results, including discussion of the primary pedagogical benefits and challenges highlighted by respondents. The opportunities and considerations for multimedia use identified in the survey will be supported by theoretical frameworks within the learning sciences to outline best practices according to student-centered instructional design. The results of this survey demonstrate that the incorporation of multimedia resources in teaching can facilitate a shift from objectivist learning and traditional textbooks toward constructivist and critical pedagogical practices that empower students to think critically about both the past and the world around them.

Gardner, William [23] see Eklund, Emily

Gardner, William [23] see Greaves, Aspen

Garland, Carey (University of Georgia)**[39]***Moderator*

Garland, Carey [232] see Pluckhahn, Thomas

Garnett, Justin (University of Kansas)**[138]***Chair***Garnett, Justin (University of Kansas)****[138]***Dueling with Basketmaker II Spear-Throwers: What Can We Learn from Mock Combat?*

Changes in weapon technologies are likely to affect many social dimensions. Understanding a society's weaponry is critical for making inferences not only about hunting but also how these groups engaged in conflict. The role of spear-throwers and darts in hunting is becoming better understood through a resurgence in their sporting use, as well as recent academic research into dart point efficacy. However, the combat dynamics of these weapons are still relatively unexplored. This research is largely phenomenological and experiential, and describes experiments in which Basketmaker II period (~4000–1500 BP) weapon replicas were used in simple but realistic mock combat by researchers dressed in personal protective equipment. This research will offer insights and help inform discussion related to the technological transition from spear-thrower to bow, and the value of hands-on experience with the tools we research.

Garnett, Justin [282] see Sellet, Frederic

Garnica, Marlen [244] see Robinson, Eugenia

Garraty, Christopher (Logan Simpson), J. Andrew Darling (Logan Simpson), Craig Fertelmes (Logan Simpson) and Barnaby Lewis (Gila River Indian Community)

[88]

Memory Culture and the Long O'odham History of Nanakmel Kii (Bat's Home), Tempe, Arizona

Archaeologists who study the relationship of memory to material culture or landscapes examine the ways in which history and cultural practice contribute to tradition-building and its perpetuation. Cultural practices are the daily embodiment of one's traditions, beliefs, or dispositions. These practices and events become part of group memory, which in turn influences future activities, including the way that Native American Tribes help manage traditional sites and sacred places. For a recent study of Bell Butte in Tempe, Arizona, appropriately known as Nanakmel Kii or Qmpanyk Nyiva ("Bat's Home"), researchers compiled the memory and material culture of one such place as a collaborative effort involving O'odham and Piipaash cultural experts. Reexamination of rock art and objects recovered by the Hemenway Expedition from a ceremonial cave clearly establishes O'odham and Piipaash affiliations with the butte and the role of O'odham songs in perpetuating the memory culture of this sacred place. O'odham recognition of the cave artifacts by name and function offers new insights regarding material culture and tradition, but in so doing questions previous cultural historical reconstructions that have long held sway in the Phoenix Basin that generally ignore historical connections and continuity with descendant communities.

Garrido, Francisco (Museo Nacional De Historia Natural), María Teresa Plaza (Universidad Católica) and Soledad González (Universidad Bernardo O'Higgins)

[178]

Two Thousand Years of Small-Scale Mining in the Southern Atacama Desert

The southern Atacama Desert boasts a long mining history that evolved within small-scale kinship groups. In the Cachiyuyo de Llampos mountains, most mines were consistently exploited sporadically over time, resulting in a settlement pattern characterized by scattered mining camps from the Formative period up to the twentieth century. Despite the arrival of the Inca Empire and later, the Spanish, local miners continued to exploit the same territory using a decentralized approach, maintaining a remarkably similar spatial usage pattern even when faced with changes in architectural style. Significant changes to craft production occurred after the Spanish arrival. Bead-making activities involving copper ores and pigment production experienced a radical decline and likely disappeared. They were replaced by gold and copper mining. Nevertheless, Indigenous people remained actively engaged in mining activities, and the social organization modes of miners endured over time. In this presentation, we present a narrative of continuity and change within small-scale mining spanning centuries, offering a preliminary approach to understanding the long-term dynamics of this mode of production.

Garrison, Ervan and Emily Jones (University of Georgia)

[92]

Scour at Artificial Reefs as a Means to Access and Study Quaternary Landforms

Using an innovative method, we report the successful location of submerged Quaternary landforms. Research into this new method was successfully carried out at erosional features associated with nine artificial reefs, along the Atlantic coastline of Georgia, termed scour nuclei, systematically identified and studied from 2021 to 2023. This successful exploitation of scoured sea floor created by artificial reef structures provides us with an enhanced ability to study the Quaternary archaeology, paleogeology, and paleoecology of submerged coastal margins.

Garrison, Thomas (University of Texas, Austin), Fernando Véliz Corado (University of Texas, Austin) and Stephen Houston (Brown University)

[26]

"The Watchers Belonging to the Warriors": Military Surveillance among the Maya

Ethnohistoric accounts from highland Guatemala allude to surveillance systems and their personnel forming part of the integrated defense of Maya political territories during the Late Postclassic period, prior to the Spanish

arrival in 1524. Recent lidar-driven archaeological research in the Maya Lowlands suggests that ancestral forms of landscape surveillance date back as early as the fifth century CE. This paper presents evidence from the Buenavista Valley of northern Guatemala, indicating that the rulers of the Tikal dynasty used a network of fortresses and watchtowers to observe movement and other activities throughout their kingdom. Excavations of defensive works from the fortified El Diablo hilltop at El Zotz, as well as from the La Cuernavilla fortress, show the scale and sophistication of the defense system; recovered artifacts leave no doubt as to the martial function of these features. Viewshed analysis reveals the extent of the system's zone of control, highlighting the dual role that surveillance played in integrating and defending Tikal's political holdings. Although the Buenavista Valley system appears unique in its extent and complexity among Classic Maya polities, it is likely that future lidar analysis will reveal similar types of surveillance networks for the largest ancient kingdoms.

Garrison, Thomas [191] see Manquen, Brody

Garski, Kevin [73] see Haas, Jennifer

Garvey, Raven (University of Michigan)

[20]

Discussant

Garvin Suero, Arianna (University of California, San Diego) and Aleksalia Isla Alayo (Universidad Nacional de Trujillo)

[87]

Exploring Ancient Subsistence Strategies through Community Archaeology at Puerto Malabrigo, Chicama Valley, Peru
We embrace community archaeology to explore ancient subsistence strategies and societal resilience to El Niño Southern Oscillation (ENSO) events at Puerto Malabrigo, Chicama Valley, Peru. Since the Middle Holocene, Andean societies have experienced ENSOs that, when most powerful, prompt heavy rainfall and flooding in some locations and severe drought in others. Today, Chicama residents continue to deal with ENSOs. In 2017, the people of Puerto Malabrigo, Chicama, fell asleep to thunder and woke up to pools as the rain leaked through their rooftops and huacos, mudslides, and devastated farmland. Malabrigo includes Chicama's irrigated floodplain, freshwater wetlands, the Pacific littoral, and the Paján Desert. Given Malabrigo's unique ecology, our research investigates how ancient Malabrigo residents survived and perhaps thrived from ENSO fluctuations. To make archaeological research on foodways and climate resilience more relevant to Malabrigo residents, we trained and hired local people in excavation and analyses and offered numerous site visits and educational and art workshops to students from February to August 2023. In this paper, we acknowledge potential risks and challenges to community archaeology and detail our methods that aim to share cultural heritage, integrate Indigenous knowledge systems, and broaden the vision of climate science to incorporate traditional knowledge.

Gary, Jack (Colonial Williamsburg Foundation)

[16]

Chair

Gary, Jack (Colonial Williamsburg Foundation)

[16]

The History and Archaeology of Burials Excavated from the First Baptist Church of Williamsburg and the Powder Magazine

The recent archaeological discovery of two different burial contexts within Colonial Williamsburg's Historic Area has provided the Colonial Williamsburg Foundation's Department of Archaeology opportunities to employ new strategies for the study and treatment of human remains. Methodologically the approach is interdisciplinary in nature while always centering descendants and stakeholders in the decision-making

process. This paper will provide the necessary historical context for the papers that will follow, highlighting the different archaeological and ethical approaches taken with two very different projects—the excavation of three individuals from the early nineteenth-century cemetery of one of the oldest Black churches in the United States and the excavation of a mass burial containing four Confederate casualties and amputated limbs from the Battle of Williamsburg in 1862. ***Images of human remains will be shown.

Gary, Jack [16] see Bender, Katharine

Gary, Jack [16] see Sevestre, David

Garza, Elisandro (CUNY) and Marc Wolf

[291]

In the Realm of Three Hills: Civic-Religious Architecture at Llano Grande, Copan, during the Late Classic Period (ca. AD 650–850)

The Copan Valley, located in western Honduras, has been inhabited by permanent communities since the Early Formative period (ca. 1400 BC). These early communities developed a lifestyle based on milpa agriculture, which continues today with the Ch'ortí Maya, the linguistic group that is the descendants of the ancient Copanecos. The origin of agriculture elsewhere in the Maya lowlands required a mechanism of time measurement to define the seasonality of the agricultural cycle. As an alternative to the monumental architectural complexes built in the Maya lowlands to measure the movement of the sun, the ancient Copanecos used the natural landscape as spaces that can be defined as E-Groups. In this work, it is argued that the site of Llano Grande functioned as an observatory with the hills of Cerro Piedra Colorada, Cerro Pacho, and Cerro de LLanetillos as natural markers that were used to observe and measure solstices and equinoxes to define the agricultural season.

Garza, Elisandro [291] see Wolf, Marc

Garza, Silvia [214] see Nielsen, Jesper

Garzón-Oechsle, Andrés (Scripps Center for Marine Archaeology)

[310]

A History of the Manteño of Bola de Oro: Understanding Manteño Adaptation to a Changing Climate through Age-Depth Modeling and Charcoal Abundance Analysis of Agricultural Landscape Modifications

A modified agricultural landscape of cultivation terraces and water retention ponds in the high elevations of the Chongón-Colonche Mountains of southern Manabí indicates a shift in agricultural practices by the Manteño civilization of coastal Ecuador (ca. 650–1700 CE). This shift must be understood through time as a societal response to a changing climate from the phases of El Niño-Southern Oscillation (ENSO) during the late Holocene. We use the abundance of charcoal within soils and sediments (excavated from three Manteño agricultural landscape modifications in the western slopes of the Bola de Oro Mountain that were identified through UAV-lidar and recognized in the field) as a proxy for the use of fire as a vegetation clearing strategy and, therefore, drier conditions at these elevations. Calibrated radiocarbon dates and age-depth modeling allowed for the identification of the earliest Manteño occupation in the mountain, the massive implementation of stone architecture and landscape modifications, the final abandonment of the region, and the eventual return of decedent communities. Manteño's success in a constantly changing climate can be attributed to their investment in transforming the most resilient environment in the territory, the cloud forest, due to the prolonged droughts and extreme floods from shifts in ENSO into a human landscape.

Gasimov, Aslan (Junior Research Fellow)

[247]

Paleolithic in Azerbaijan: Research History, Finds, and Dating

Until the middle of the twentieth century, Soviet archaeologists believed there was no Old Stone Age in Azerbaijan. However, as a result of the research of M. Huseynov, it was revealed that humans inhabited the territory of Azerbaijan during the Paleolithic period. The research conducted in the Damjili and Dashsalahli caves found evidence of ancient human settlement. Later, in the 1960s, excavation works began in the Azikh cave. The research revealed that hominins had chosen the Azikh cave as a place of residence a million years ago. Excavations in the cave provide us with valuable information about the activities of hominins in the Lower and Middle Paleolithic periods. In 1968, a mandibular bone believed to belong to a woman was unearthed in the cave. It is estimated that this jawbone dates back to 300,000–400,000 years ago. In my opinion, further research is needed to refine our understanding of the mandible. In the Guruchay valley, shreds of evidence suggest that humans settled there before the Azikh and developed the Guruchay culture. This culture is known as the oldest human traces in the territory of Azerbaijan. Ongoing research in the Paleolithic period continues to shed light on the region's history.

Gastello, Mauricio [299] see Tantaleán, Henry

Gastelum-Strozzi, Alfonso [106] see Budziszewski, Adam

Gates, Henry Louis [311] see Comer, Elizabeth

Gates St-Pierre, Christian [259] see Gilson, Simon-Pierre

Gaudzinski-Windheuser, Sabine [141] see Meyering, Lisa-Elen

Gaudzinski-Windheuser, Sabine [93] see Robitaille, Jerome

Gaughen, Shasta (Pala Band of Mission Indians)

[97]

Discussant

Gauthier, Nicolas (Florida Museum of Natural History, University of Florida) and Darcy Bird (Washington State University)

[107]

Climate Teleconnections Synchronize Human Population Dynamics

Climate variability can significantly constrain the population dynamics of ancient agrarian societies, although its direct influence is often mediated by a complex interplay of social, ecological, and technological factors. Untangling these relationships in the archaeological record is challenging due to the scarcity of spatially continuous paleoclimate data and the paucity of theoretical models that can capture the spatial dimension of these various influences. Here, we address this challenge by integrating archaeological data with spatially explicit paleoclimate reconstructions in a spatial metapopulation model. Our model shows how recurring spatial modes of climate variability, climate “teleconnections,” can synchronize population dynamics and mobility over extensive geographical scales and allows us to explore the sensitivity of this relationship to social and technological variables. Understanding how climate variability induces spatial synchrony in human populations offers fresh insights into cycles of human population expansion and recession and has broader implications for our understanding of long-term trends in social interaction, cultural evolution, and biodiversity.

Gauthier, Nicolas [229] see LeFebvre, Michelle

Gauthier, Nicolas [287] see Rutkoski, Ashley

Gauvrit Roux, Eugénie (Géosciences Rennes UMR6118 CNRS ; Creaah UMR6566 CNRS)
[307]

Challenging Current Perspectives on Late Pleistocene Stone Toolkits across Beringia through Use-Wear Analysis

Microblade technologies are a structuring component of the Late Pleistocene archaeology across the Bering Strait because of their wide chronological and geographical extension. To fully understand the technoeconomical strategies underlying the success of this innovative toolkit in periglacial environments, we propose a macroregional technofunctional comparison of contexts yielding early microblade components on Hokkaido (Pirika), in Eastern Siberia (Kovrizhka IV), and in Interior Alaska (Swan Point). Use-wear data allow defining how tools were implemented (gesture, worked materials, hafting) and managed (sharpening, reuse, multiple uses, recycling, transport). Specific tool categories such as end scrapers were specialized in a task and had long biographies, while microblades were multipurpose tools with short lifetimes. Their high standardization and overproduction may have aimed at a fast and easy maintenance of composite tools. *Chaînes opératoires* were segmented at different steps (e.g., tools production and use, hide processing), facilitating the mobility of groups. These data show that in the contexts considered, the anticipation of needs was an important feature of the life of nomadic societies of hunter-gatherers.

Gaylord, Donald (Washington and Lee University)
[181]

Discussant

Gaylord, Donald (Washington and Lee University)
[197]

Landscape History and the Built Environment at Liberty Hall

Like all landscapes, the one at Liberty Hall has been dramatically impacted by the people who lived here. Originally part of the Monacan Indian Nation's homeland for at least a thousand years, the hilltop site's proximity to a significant ford over the north branch of the James River and a pair of strong-flowing springs attracted first colonial farmers and then the Liberty Hall Academy, which was a predecessor to Washington and Lee University. After the academy moved in 1803, the site became a slave plantation. Fifty years of archaeological, historical, and oral historical research here has produced significant landscape-level data about the built environment and people who lived and labored at Liberty Hall. Using modern digital technology, we can begin to create models detailing this complex and ever-changing historical landscape with the recognition that these models will be refined and transformed as our ongoing work generates new data. This poster will show how this work has progressed over the last decade of research.

Gayó, Eugenia [337] see Ugalde, Paula

Gblerkpor, William (Western Illinois University)
[250]

Pursuing Park Museums and Archaeology in Ghana: A New Frontier in Heritage Education and Development

How significant are newly established museums and archaeological projects in national parks to the future of Ghana's heritage education and community development? The inauguration of the Museum of Natural and Cultural Heritage at Shai Hills has revealed a promising relationship between archaeology, community engagement, heritage education, and community development in the country. These parks and resource reserves contain well-preserved archaeological sites, pilgrimage sites, historical landscapes, and biocultural heritage resources. This paper discusses the relevance and challenges of my recent archaeological research in the Mole National Park and Shai Hills Resource Reserve. It also examines the benefits of a biocultural heritage approach to archaeological research, heritage conservation, museum and heritage education, and community engagement and development. The paper concludes discussions by examining the ongoing collaboration between Professor Ann B. Stahl's Banda Thru Time Project and the Museum at Shai Hills Project, a component of the West African Biocultural Heritage Project I initiated in 2017.

Gchachu, Michael [269] see Heitman, Carrie

Geib, Phil (University of Nebraska, Lincoln) and Faithleigh Podzimek (University of Nebraska, Lincoln)

[337]

CT Imaging and Radiocarbon Dating of a Gourd Container with Vertically Strung Olivella Shells: A Pueblo I Cache from Old Man Cave, Utah

We report the findings from a study of a gourd container recovered from Old Man Cave of southeastern Utah. Strung, spire-topped *Olivella* beads are visible on interior of the gourd, but sediment in and around the shells obscured the full nature of its contents. Computed tomography (CT) imaging allowed us to identify durable objects within the gourd in a nondestructive manner and enabled an accurate count of shells. The beads exhibit an unusual method of side-by-side stringing that we attempted to replicate through experimentation. Worn surfaces indicate that the beads had been strung and used this way for a lengthy interval. A sample of the gourd submitted for radiocarbon dating revealed that the cache dates to the Pueblo I period, sometime between 665 and 780 cal AD. This container might have been placed in the site as an offering to the ancestors who used this shelter during prior centuries.

Geib, Phil [244] see Podzimek, Faithleigh

Geiger, Elspeth (University of Michigan)

[130]

A Diachronic Perspective on Wetland Resource Scheduling in Michigan: Evidence from the Potagannissing River

Nearly 15% of Michigan is covered by wetlands. These environments are widely regarded as critical components of Michigan's unique ecological makeup. From an archaeological perspective, the biological diversity, productivity, and dependability of these natural communities fulfill a variety of societal needs. Moreover, as a site for seasonal aggregation, coastal or shoreline wetlands can be easy to locate, access, and provide a wealth of warm-weather foods that support the carrying capacity of larger populations. In the case of the multicomponent Cloudman site (20CH6) on the Potagannissing River, microfossil evidence has provided a fuller picture of the utility and desirability of wetland resources, including economically important foods like Manoomin, also known as wild rice (*Zizania palustris*). Using carpological, palynological, and faunal data, the role of wetland resources at the Cloudman site can be explored in terms of long-term resource scheduling throughout the Late Woodland period and into the historic period. Results have begun to reveal landscape management and seasonality across the different occupations.

Gelabert, Pere (University of Vienna), Victoria Oberreiter (University of Vienna), Lawrence Straus (University of New Mexico), Manuel Ramon Gonzalez (University of Cantabria) and Ron Pinhasi (University of Vienna)

[247]

Sedimentary DNA Displays the Upper Paleolithic Human-Carnivore Interface in El Mirón Cave (Spain)

Humans and carnivores competed for the same ecological niche during the Paleolithic, including caves used as shelters that they even alternately occupied in many cases. Through the presence of archaeological material, including animal bones, we can assess the human occupation periods and their intensity. Iberia represents one of the main European human refugia during the Last Glacial Maximum (LGM) and therefore has a key interest in the understanding of the human population dynamics before, after, and during such climatic events. Here, we present genetic data from the complete stratigraphic archaeological sequence of the site of El Mirón Cave, from which we have recovered three human mtDNA sequences from Solutrean layers and multiple mammalian mitochondrial data from all the screened layers. In addition, we have also produced a new radiocarbon date and mitochondrial genome from a human Gravettian tooth from the vicinity cave of Chufín, extending the available data on such a period in the Cantabrian region. The animal data shows a differential presence of carnivore species through the archaeological sequence of El Mirón.

Geller, Pamela (University of Miami)**[89]***The Plastic Bag Paradox: Taphonomy and Complicity in the Archaeological Archive*

Plastics present a paradox for archaeology. They are ubiquitous and inevitable, taking myriad forms—bags for artifacts, tarps for units, containers for storage, etc.—in excavation and archival settings. Their utilitarian value is predicated on the presumption of durability and stability. But for how long and in what kind of conditions? Evidence marshaled highlights the inconvenient truth of plastics' degradations (plural, for not all plastics are built the same), as well as the discipline's analytical inattention to their taphonomic transformation. (This inattention is a special kind of irony for a field that prides itself on studying the preservation of material culture over the *longue durée*.) With a growing awareness of plastics' ties to global pollution and climate change, archaeologists' continued reliance may be read as complicity. The identification of sustainable alternatives is one possible solution. Though it is one not easily realized. Perhaps more realistically—and more in line with decolonial work—the plastics paradox nudges archaeologists to assess the unsustainability of our disciplinary ethos, especially those practices that promote endless excavation, storage, and curation of archaeological materials.

Geller, Pamela [209] see Roske, Mycroft

Gembicki, Maciej (University of Adam Mickiewicz, Poznan, Poland)**[80]***Chair***Gembicki, Maciej (University of Adam Mickiewicz, Poznan, Poland), Meradeth Snow (University of Montana), Danielle Airola (University of Montana) and Marcin Krzepakowski (Museum of Wagrowiec, Poland)****[80]***A Synthesis of Archaeological, Genetic, and Spatial Data in Studying Medieval Families: An Example from the Vanished Village of Gać, Poland*

In our paper, we aim to demonstrate the use of spatial, genetic, and archaeological data in family studies by using a Medieval cemetery in Gać as our case study. An international team of archaeologists and anthropologists have partially recovered and examined a cemetery situated in the now-vanished village of Gać over three seasons, as part of a Mortuary Field School supported by the Slavia Foundation. The investigations have uncovered 206 burials dating from the fourteenth to the sixteenth centuries. The cemetery at Gać presents an excellent opportunity to examine family structures in the underrepresented context of Medieval Central Europe. Results from our spatial analyses indicate that the graves were not located randomly. Moreover, subadults burials form clusters, and the distance between the burials of women and those of subadults indicates a deliberate effort to keep them in close proximity. These patterns suggest clusters represent family units, formed mainly by the grave of a mother and her prematurely deceased children. Another interesting phenomenon is the observed custom of inserting additional skulls into the coffins of the deceased. This practice may have been a gesture of respect toward a deceased relative whose grave may have been accidentally destroyed during burial.

George, Michelle [87] see Efford, Meaghan

George, Rebecca [300] see Passalacqua, Nicholas

George, Richard (University of California, Santa Barbara), Douglas Kennett (University of California, Santa Barbara), Stanley Serafin (University of New South Wales, Sydney), Marilyn Masson (University at Albany, SUNY) and John Krigbaum (University of Florida)**[42]***Strontium Isotopic Evidence Reveals Sustained Levels of Intraregional Migration at the Postclassic City of Mayapán*

We examine the process of migration using strontium isotope ratios from human enamel to shed light on the organization of the Mayapán polity during the formation (1200–1250 CE), apogee (1250–1400 CE), and decline (1400–1500 CE) of the city ($N = 58$). Our results support consistent local aggregation within the Chicxulub Basin and immigration from across the Yucatán Peninsula. Although we did not identify migration from outside the Maya lowlands, the results suggest that intraregional movements remained a key component of the population structure during all three periods. Strontium data from the third molar of 16 burials suggests high residential mobility during childhood and adolescence prior to interment at Mayapán. While we identified considerable stability between socioeconomic groups within the sample population, we found higher similarity between high-status burials inside the monumental core and most low-status burials across the city than with high-status burials in the settlement zone, who all exhibited origins outside the Chicxulub Basin. Additionally, 13 out of the 17 casualties exhibited nonlocal values. These results suggest that the urban population consisted of a high percentage of first-generation immigrants and demonstrate the regional origins of the cosmopolitan nature of this important Postclassic period center.

George, Richard [217] see Robinson, Mark
George, Richard [200] see Semanko, Amanda

Georges, Jemima [275] see Pugh, Timothy

Geraci, Peter (UW-Milwaukee)
[228]

From Gray to Gold: A Reexamination of the Woodland Period in Northeastern Illinois Using Legacy Collections and Gray Literature

Northeastern Illinois is an understudied, underappreciated region of focus in current archaeological discourse, particularly in Woodland period studies. Historically, archaeologists have concentrated on areas with the most conspicuous signs of ancient activity to the exclusion of the areas that connected them. In the Riverine-Great Lakes region most of the intensive archaeological work has been conducted at large villages and mound sites along the Illinois and Mississippi Rivers, however in recent decades more emphasis has been put on lesser studied regions. The Woodland period in northeastern Illinois has received little attention despite its important strategic location connecting the Great Lakes to the Mississippi River valley via its many rivers and overland routes. The archaeological record of northeastern Illinois may not be as rich as other regions, but it can still provide answers to important anthropological and archaeological questions. The goal of this paper is to demonstrate how disparate data from past surveys and excavations, historical sources, and personal communications can be used to test theories regarding diachronic changes in interregional interaction, settlement and subsistence, technology and religious practices during the Woodland period in the Riverine-Western Great Lakes region.

Gerard-Little, Peregrine [270] see Orr, Andrew

Gerstenblith, Patty (DePaul University College of Law)
[180]

Discussant

Geurds, Alexander (University of Oxford)
[296]

Discussant

[296]

Chair

Geurds, Alexander (University of Oxford)**[296]***Mounds and Monoliths in Isthmo-Colombian Archaeology*

The Isthmo-Colombian Area entails an archaeology of landscape engagement. Well-attested are the material traces of shifting networks of human ideas that, through communities of practice, led to the creation of monumental landscapes and, with regional specificity, shared forms of artistic expression, from parts of Honduras and El Salvador to Colombia from around AD 300. This paper focuses on two primary sources of material evidence: one is through landscape alteration practices (e.g., mounding, rock art creation, pathway maintenance) and another is through the widely attested selection of igneous stone as an artistic material to behold and work (e.g., naturally-shaped rocks, carving of stone sculpture, elaborate grinding stones). Archaeological studies elsewhere convincingly argue for the creation of social space and time by means of such practices, allowing for communal memory and understandings of relatedness or difference when traveling the land. While the emerging area-wide picture is discontinuous and marked by stylistic variation, the mentioned practices of mound-creation and working with volcanic stone seems to be a repetitive preference. A new research project, briefly introduced here, will attempt to study such patterns from an area-wide perspective and argue for seeing the creation of mounds and use of monoliths as a social technology.

Geurds, Alexander [157] see Arce Buitargo, Tomas

Geurds, Alexander [158] see Torreggiani, Irene

Gevorgyan, Hripsime [50] see Lindsay, Ian

Ghaheri, Fatemeh**[169]***Understanding Climatic Condition, Ecosystems, Subsistence Strategies, and Human Adaptation through Microbotanical Analysis in Late Holocene Northern Mesopotamia*

The semiarid region of Northern Mesopotamia has consistently encountered significant climatic variations. Therefore, human societies in the region developed innovations in environmental management and agricultural strategies, given the crucial role of agriculture in economy, trade, and politics all throughout history and in our modern world. Among all the different methods and approaches to study human societies in the past phytolith analysis stands out due to its multifaceted capabilities allowing us to examine various aspects of history. Since phytoliths indicate plant parts, plant species, and plant subfamilies, and they are preserved in different conditions, they offer a highly reliable proxy even in areas where other forms of evidence such as pollen cannot be preserved. The interpretation and assessment of phytolith data across different spatial contexts enables us to analyze the function of spaces, human-environment interaction, climatic conditions, and agricultural strategies. Drawing on compelling new microbotanical phytolith evidence gathered from Iron Age sites in the Kurdistan region of northern Iraq, this study discusses the functionality and construction techniques of buildings, utilization of diverse micro-environments and plants, and implementation of rainfed and local irrigation as vital methods to manage environmental fluctuations, agricultural challenges, and subsistence strategies prevalent at the time.

Gibbons, Jorge [158] see Garcia-Piquer, Albert

Gibbs, Anna**[171]***Reevaluating Conclusions: New Data and Theories on Intrasite Find Distribution in Medieval Incastellamento, San Giuliano Plateau, Lazio, Italy*

The San Giuliano Archaeological Research Project (SGARP) began excavations in 2016 to elucidate the complex occupational history of the San Giuliano landscape in Lazio, Italy. The archaeological record indicates diachronic habitation spanning the Bronze Age to the medieval period evidenced by a large Etruscan

necropolis and a hilltop medieval fortification. In 2020, my undergraduate thesis research focused on this medieval fortification and process of *incastellamento* (the relocation of large parts of the medieval Italian population into defensible, fortified sites between AD 700 and 1200), by using ArcGIS, artifact distribution patterns, and associated architectural features, to draw conclusions about spatial usage, social function, and behavior dynamics in the medieval castle zone. Since 2020, two field seasons have occurred, and the new data have led to a reevaluation of previous conclusions and a refinement of methodological and theoretical practice. This poster will offer a critique of my previous work, as well as introduce new techniques for including glass shards in a finds analysis, differentiating between coin types, and add several new spatial categories to the GIS statistical cluster functions along with the use of the theory of materiality to address the arbitrary, non-critical grouping of artifacts.

Giberto, Javiera [117] see Correa Gurrulat, Itaci

Giblin, Julia (Quinnipiac University), Jaime Ullinger (Quinnipiac University), Naomi Gorero (Quinnipiac University), Jillian Clark (Quinnipiac University) and Melissa Trudeau (Quinnipiac University)

[68]

Bone Color as a Tool to Interpret Differing Cremation Patterns in Bronze Age Eastern Hungary

The Bronze Age Körös Off-Tell Archaeology Project (BAKOTA) has excavated 84 burials from a Bronze Age cemetery (Békés 103) located in the Lower Körös Basin in Eastern Hungary. Radiocarbon dates indicate that the cemetery was used for several hundred years, with the most active phase between 1600 and 1280 cal BC, a time that has been associated with the abandonment of tells in the region at the end of the Middle Bronze Age. Most of the burials were cremated and placed in ceramic urns. While cremation is a common mortuary practice in Hungary during the Bronze Age, grave good and body placement patterns differ by region, and little is known about the specifics of how bodies were prepared and processed prior to burial. Bone color, as a reflection of cremation temperature, has been assessed in 30 of the cremation burials at Békés 103 to explore whether mortuary treatment differed by age, sex, grave goods, or over time. Earlier research on the site with a smaller sample found that bone calcination was more common in nonadults between the ages of 6 and 12. Here, we assess whether this pattern remains when more of the burials are examined.

Giblin, Julia [68] see Ullinger, Jaime

Gibson, D. (El Camino College)

[277]

The Irish Medieval Patron-Client State in World Perspective

The state of the O'Briens, at times called the Kingdom of Limerick, lasted from the mid-eleventh century until it accepted the sovereignty of Henry VIII at the end of the sixteenth century. In its features it conforms to the model of the patron-client state that William Sanders formulated to distill the similarities in organization that were apparent in historic African kingdoms and the polities of the Classic period lowland Maya. While it is to be doubted that the Classic Maya possessed states, the Kingdom of Limerick compares well with historic East African states, as well as with the kingdoms of the Goths of Late Antiquity. This paper updates Sanders's model and demonstrates its fit to historic Celtic, Gothic and Bantu kingdoms. It will be shown that all patron-client states began their existence as chiefdom confederacies that evolved into states where alliances between the participating leaders continued to play a key role. Aristocratic polygyny posed a constant challenge to the state's stability that was dealt with in different ways by the historic states. Though born in violence, contrary to expectations, patron-client states proved to be remarkably stable and resilient. The reasons why they were so will be explored.

Gidna, Agness [151] see Grillo, Katherine

Gidusko, Kevin [329] see Lewis, Cheyenne

Gifford, Chad (Columbia University)

[146]

Discussant

Gil, Adolfo (CONICET- IDEVEA), Eva Peralta (CONICET-IDEVEA), Jacob Freeman (Utah State University), Manuel Lopez (CONICET-IADIZA) and Gustavo Neme (CONICET-IDEVEA)

[107]

Population Dynamics and Subsistence Variability on the Farming/Hunter-Gatherer Boundary: Central Western Argentina as a Case Study

This case study integrates times-series of multiple types of proxy to evaluate causal relationships between population dynamic, subsistence/diet variation, and ecosystem change. The presentation evaluates whether intensification based on wild and domesticated resources takes different evolutionary trajectories. We present trends in population dynamics in central-western Argentina (CWA) regarding two main processes: intensification in resource exploitation and the introduction of domesticated resources. CWA was occupied by hunter-gatherers since the Late Pleistocene / Early Late Holocene. It is proposed that in the North and Center of CWA, this lifestyle was disrupted by the introduction of domesticated plants (i.e., maize, beans, quinoa, and squash) ca. 2500 BP. In the South of CWA, exploitation of wild resources under a hunter-gatherer system continued until historic times. We employed summed probability distribution of radiocarbon dates to estimate changes in population density and carbon and nitrogen stable isotopes analysis to reconstruct the human diet. We compared both lines of inquiry in three geographic and ecologically distinctive areas of CWA to explore the relation between population growth/decline, the carrying capacity of the environment, and cultural responses. We propose that cultigens impacted each area differently, which could respond to specific feedback between environmental constraints and population dynamics.

Gil, Adolfo [178] see Neme, Gustavo

Giles Flores, Ivonne [260] see Corona-M, Eduardo

Gilewski, Michal (Uniwersytet Warszawski)

[194]

Vertical Economy of Prehispanic Pacific Coast Guatemala

The prehispanic and indigenous cultures of the Pacific coast of Guatemala are usually known from ethnographic research and ethnohistorical sources that relate to specific local communities and to local archaeology that relates to specific sites. In this paper, I present how environmental diversity leads to interdependence and integration of the whole region. Among the data, I present various ethnographic and ethnohistoric information and compare it to past archaeological summaries. In conclusion, I pick up the suggestion of Spanish ethnohistorian Elias Zamora Acosta and compare this interregional system to the concept of “vertical economy” known from the Andean region.

Gili, Francisca [37] see Echenique, Ester

Gill, Lucy (University of British Columbia) and Natalia Donner (Leiden University)
[157]

Collaborative Archaeological Research in Central America: A View from the Community of Mogue, Pusa Drua Area, Congreso Local de Tierras Colectivas Emberá Wounaan, Darién, Panama

Over the past three decades, archaeologists and Indigenous communities throughout the Americas have developed varied approaches to collaborative archaeological research. In North America, where there is some legislative recognition of Indigenous sovereignty over cultural heritage, such approaches have transformed the landscape of archaeological research. In Central America, where paradoxical state policies partially recognize Indigenous sovereignty over ancestral lands but all archaeological heritage is under national control—facilitating settler encroachment and inhibiting Indigenous stewardship of cultural landscapes—these frameworks have had much less impact on archaeological scholarship. Despite this challenging political context, conducting collaborative research with Indigenous communities can have ethical and epistemic significance in Central America. We first discuss how co-designing research in the Emberá tierras colectivas of Mogue (Darién Province, Panama) in accordance with Indigenous traditions of knowledge production and governance, which involve reciprocal knowledge sharing, building emotional ties, and transmission protocols, continues to transform what is defined as collaborative archaeological practice in this community. We then illustrate how collaborative interpretations have advanced scholarly understanding in established domains of regional archaeological research. We conclude by discussing broader implications of Indigenous traditions of knowledge production, which mandate a concern by archaeologists for community-based, rather than national, stewardship of cultural heritage.

Gill, Lucy [222] see Donner, Natalia

Gillam, J. Christopher (Winthrop University)
[253]

Chair

Gillam, J. Christopher (Winthrop University)
[253]

Big Ideas on Big Migration(s): Paleoindian Colonization of the Americas, Revisited

In the mid-1990s, David Anderson was already an accomplished National Park Service archaeologist and scholar in the US Southeast and beyond. I was a fresh out of Arkansas MA with a Shuttle Radar Topography Mission (SRTM) data tape from NASA's Jet Propulsion Lab (JPL) and some big ideas on the peopling of the Americas that meshed well with Dave's own. When I reached out to Dave for a copy of his growing fluted-point database, the precursor of the Paleoindian Database of the Americas (PIDBA), a collaboration was born that would lead to our colonization of the Americas paper in *American Antiquity* (2000) and many others. That publication remains one of the most cited Paleoamerican archaeology papers today and has held up remarkably well over the decades. This paper revisits that popular work and updates the most probable East Asian cultural hearths, timing, and routes of Paleoamerican migration(s) of the late Pleistocene.

Gillaspie, Amy (Denver Museum of Nature & Science), Steve Nash (Denver Museum of Nature & Science), Natalie Patton (Buffalo Bill Museum and Grave), Magen Hodapp (Northern Arizona University) and Chrissina Burke (Northern Arizona University)
[9]

The Jones-Miller Legacy Collection: Reexamining the 10,800-Year-Old Bison Butchery Site

The Jones-Miller Site, located in the eastern Colorado tri-state area, was excavated in the mid-1970s. The Hell Gap complex site has been credited as the only bison butchery site of its kind and size in Colorado, yielding 41,000 *Bison antiquus* bones, 200 stone tools, 11,000 pieces of debitage, and hundreds of liters of soil samples. In 2017, the Jones-Miller Collection returned to Colorado from its long-term loan at the Smithsonian to be rehoused and added to the collections at the Denver Museum of Nature & Science. Dennis Stanford, the principal investigator, worked with many colleagues to conduct a robust set of research

sharing about and explaining the site, including carbon dating, tool analysis, paleoclimate reconstructions, and general zooarchaeological analyses. Stanford planned to publish a manuscript compiling these results, but unfortunately, this did not come to fruition. Here, we present our work rehousing, cataloguing, and reexamining the collection. Additionally, we will share our findings that replicate the results Stanford and team had while highlighting differences in our results from those that the Jones-Miller research team found. Finally, we share future goals, both for the unpublished manuscript, and the future of research with the collection.

Gillaspie, Amy [13] see Koons, Michele

Gilleland, Sarah (Binghamton University), Matthew Emery (Binghamton University), D. Andrew Merriwether (Binghamton University) and Carl Lipo [24]

Paleoenvironmental Reconstruction at Poverty Point Using Ancient Sedimentary DNA: Potential and Challenges
Poverty Point is a wonder of engineering, with over 2 km² of earthworks constructed over several hundred years around 3500 BP. While the timing of the deposit's construction has been a topic of research for nearly 100 years, there has been relatively little investigation into the resources that would have encouraged large populations to gather, contributing to construction of the earthworks. Exploration into subsistence remains has been difficult because the acidic soils of the region tend to degrade macrobotanical and faunal remains. Researchers therefore often rely on comparative samples found at other sites in the region to draw conclusions about the subsistence resources used at Poverty Point. Innovations in ancient sedaDNA (sedimentary DNA) extraction techniques offer potential avenues for reconstructing subsistence data. In this paper, we address the potential of these new techniques as well as the challenges collecting sedaDNA from tropical environments. Specifically, we discuss recent improvements to sedaDNA extraction, library preparation, and targeted enrichment protocols that enhance both the efficiency of sequencing and the detection of target organisms using fragmented and damaged DNA molecules. While tropical locations are not ideal for measuring sedaDNA, these innovations increase the likelihood of recovering ancient ecological information from less favorable environments.

Gillespie, Jeanne and Cherra Wyllie [129]

Framing Unequal Boundaries: Women, Queens, and Gender

Since the landmark 1986 *Blood of Kings*, kingship has been a central theme in the archaeology, iconography, and epigraphy of the ancient Americas. Despite recent discoveries, the topic of women rulers remains ancillary to the larger view of male-dominated social and political power. During the past 30 years, roles of women have been presented within broader discussions of gender, with the 1996 Dumbarton Oaks symposium "Gender in Prehispanic America" infamous for its contentious divides. Although gender theory is more widely accepted today, the identification of women in iconography and archaeological context is fraught with residual a priori assumptions that an individual is sexed male until proven otherwise. In Olmec studies, as well as other areas, courageous scholars who challenged these norms were often castigated by their predominantly male colleagues. Only now are their interpretations being reevaluated by a new generation of scholars. This presentation focuses on women in Mexican Gulf Coast archaeology and art history, both the scholars and historic personages that continue to shape our understanding of this oft-neglected region.

Gillespie, Jeanne [322]

Moderator

[322]

Discussant

Gillis, Rosalind (Referat Naturwissenschaften)**[334]***Discussant***[WITHDRAWN]****Gillis, Rosalind (Referat Naturwissenschaften), Richard Madgwick (Cardiff University), Marta Dal Corso (University of Padova), Federico Polisca (University of Padova) and Cristiano Nicosia (University of Padova)****[334]***Multi-isotope Perspectives of Sheep Herding during the Bronze Age at the Village of Oppeano***[WITHDRAWN]**

Gillispie, Thomas [120] see Sattler, Robert

Gilmore, Kevin (HDR)**[329]***Vicksburg before the Siege: Paleoenvironment, Population Expansion, and a Delayed Woodland to Mississippian Transition in the Lower Mississippi Valley*

Based on recent archaeological work at Vicksburg National Military Park, the Late Woodland to Mississippian transition in the Lower Mississippi Valley extended beyond the traditionally defined end of the Woodland period, with evidence suggesting the Coles Creek-Kings Crossing phase (1000–1100 CE) persisted as late as 1200 CE. This work also suggests stable, mesic climate and pressure from a growing population contributed to the expansion of Kings Crossing phase people into the less agriculturally productive loess hills ca. 1050–1200 CE. Population grew significantly 600–700 CE and 950–1050 CE, reaching a stable peak ca. 1050–1200 CE. This correlates to more than a century of greater precipitation and climate stability 1017–1139 CE. Sustained occupation of the loess hills during this period is indicated by the presence of Kings Crossing phase ceramics throughout the Vicksburg project area, a burn feature containing cultigens dated 1050–1210 CE, and fired clay suggestive of a wattle and daub habitation structure. Stable, mesic conditions and population growth contributed to an expanding and more socially complex and agriculturally productive periphery. Sustained occupation of the loess hills ended during a period of significant drought and increased climate volatility 1140–1250 CE accompanied by rapidly decreasing population, and withdrawal to more fertile floodplain environments during the subsequent Plaquemine (1200–1450 CE) period.

Gilson, Simon-Pierre**[259]***Chair***Gilson, Simon-Pierre, Christian Gates St-Pierre (Université de Montréal) and Andrea Lessa (Museu Nacional do Rio de Janeiro)****[259]***Shark Remains in Brazilian Coastal Settlements*

Precolonial Brazilian coastal sites are rich in shark centra and teeth. They are frequently found inside the sediment matrix or as funeral deposits. The presence of shark teeth has been approached from zooarchaeological and ethnohistorical perspectives along with experimental archaeology and use-wear analysis. The Rio do Meio site was used as a study case. The combined methods allow us to infer data about shark fishing techniques and objectives used by native groups, the extraction of shark teeth through the use of heat from flames or hot water, the use of shark teeth as tools, the discard of fragile shark teeth unsuitable for manufacturing objects, the use of shark teeth as projectile tips. Finally, the study of the remains allowed us to reflect on the place and the fishing techniques as well as the processing of shark carcasses and their transport.

Gimson, Martha [44] see May, J.

Gingerich, Joseph (Ohio University) and David Lamp (Ohio University)

[219]

Coming into Ohio: Early Paleoindian Mobility

In this paper, we propose a new idea for the early colonization of Ohio, which is likely applicable to other previously glaciated regions. Concentrations of Paleoindian materials around wetland features may represent the first resource locales exploited during colonization. These areas became less attractive as megafauna and other resources declined. This pattern of Early Paleoindian land use may provide an alternative explanation for the distribution of Paleoindian materials in similar environments and provide further insights into seasonal mobility.

Ginson, Grant [174] see Foran, Debra

Gintert, Charlotte [45] see Marino, Maeve

Giovas, Christina (Simon Fraser University), Michiel Kappers (InTerris Registries / QLC Inc.), Kelsey Lowe (University of Queensland), Yoshi Maezumi (Max Planck Institute for Geoanthropology) and Claudia Kraan (NAAM Foundation)

[60]

Curaçao's Oldest Site: Dates from the Rif St Marie Rockshelter Revise Earliest Island Settlement

In 2022, the Curaçao Cultural Landscape Project (CCLP) initiated a long-term field investigation on the ecological legacy of Indigenous and European colonial occupation of Curaçao, in the southern Caribbean. Excavation at a recently identified rockshelter site along the inland bay of Rif St. Marie (RSMA) identified significant archaeological deposits comprising lithic and coral artifacts, shell and bone, and several large combustion features. Three closely aligned radiocarbon dates on charcoal place the RSMA Rockshelter within the Archaic period and indicate that the site is Curaçao's earliest, extending the antiquity of human settlement on the island to the early fourth millennium BC. We report on the archaeological findings to date from the RSMA Rockshelter and the implications of the revised settlement chronology for Curaçao's earliest colonization and the evolution of the island's cultural landscapes.

Giovas, Christina [135] see Conlan, Christine

Giraldo, Santiago (World Monuments Fund and Fundación ProSierra)

[208]

Discussant

Giraldo, Santiago (World Monuments Fund and Fundación ProSierra)

[296]

Impermanent Architecture, Monumentality, and Landscape Transformation in the Sierra Nevada de Santa Marta, Colombia

From AD 100 to 1600, the northern and southern faces of the Sierra Nevada de Santa Marta were permanently transformed by prehispanic societies who built hundreds of stone and rammed earth towns throughout an area encompassing over 7,000 km². Despite the extent and scale of their work, only the stone foundations of their towns remain, hidden beneath forests, pastures and farmland, as the standing architecture was all built from perishable materials. How then can we reconcile impermanence with monumentality and analyze in more subtle, varied, and complex ways how societies seek to signify, change, and transform the places they inhabit?

Giraldo Tenorio, Hernando (Universidad del Cauca) and Marcela Benavides Imbachi (Universidad del Cauca)**[220]**

Diferenciación social y económica en la comunidad prehispánica de Moscopán, suroccidente de Colombia
Recientes investigaciones arqueológicas sobre las unidades políticas prehispánicas del suroccidente colombiano resaltan que las desigualdades sociales no fueron el resultado del control diferencial en la producción de ciertos bienes ni en la acumulación de riqueza por parte de la elite, sino en prestigio y el uso de la religión como fuente de poder. Sin embargo, los datos siguen siendo escasos para muchas unidades políticas. En esta charla se presentan los resultados de la investigación arqueológica sobre diferenciación social y económica de una comunidad prehispánica de la región de Moscopán, un asentamiento prehispánico con estatuaria y localizado entre los cacicazgos de Mesitas y el valle de Popayán.

Gjerde, Jan Magne (NIKU, Norwegian Institute for Cultural Heritage Research)**[156]**

Walking in Winter Landscapes: Reflections on Temporality and Seasonality in Stone Age Rock Art of Northern Europe
Temporal changes and surroundings are of vital importance to hunter-fisher-gatherers (HFG) and guide activities of HFG in northern Europe throughout the year. Lifeways differ between and within the regions of northern Europe, e.g., coastal northern Norway, inland central Sweden, or lake districts of Finland. The cynegetic activities (activities connected to hunting) of HFG change dramatically by the seasons of the year. Temporality, seasonality, seascapes, and landscapes are represented in HFG rock art by site location, motifs, scenes, and compositions related to “seasonal” activities. Stone Age rock art is a window to major innovations of people living in winter landscapes (e.g., skis, snowshoes) or seascapes (boats). Most rock art sites would have been accessible throughout the year; rock carvings in the tidal zone or near rapids would be snow- and ice-free during winter, while vertical cliffs with rock paintings would be exposed and more visible and accessible during winter. In turn this would have impact on how we study and interpret the lifeways of people inhabiting Frozen Worlds of the past. The backdrop of the study is comprehensive fieldwork during the last 20 years, studying rock art, rock art sites and their location during different seasons of the year.

Glascock, Michael [121] see Czujko, Stephen

Glaser, Vanessa (Montclair State University), Matthew Goring (Montclair State University), Simon Mitchell (University of the West Indies, Mona Campus), Jeffrey Ferguson (University of Missouri) and Peter Siegel (Montclair State University)**[287]**

Petrographic and Geochemical Analysis of Pottery from the White Marl Archaeological Site, St. Catherine Parish, Jamaica, West Indies

White Marl is the largest, most intensively inhabited late-precolonial site documented for Jamaica, with an artifact assemblage dominated by massive quantities of ceramics. Its size and structural organization suggest that it functioned as a major sociopolitical/economic hub among the increasingly complex chiefdoms in the Greater Antilles. To address the origin of materials from which White Marl pottery was produced, petrographic and geochemical analyses were conducted on samples of ceramics and nearby sediments. Compositional analyses of White Marl ceramics display consistencies across sherds that represent the full range of vessel forms and functions. Mineralogically, clay, quartz, well-weathered rock fragments, and feldspars dominate, with minor opaque minerals, muscovite, and amphiboles. Local raw sediments display varying compositions across samples, although one sand sample collected ~60 m south of the site was consistent with the pottery. The homogeneity of the analyzed ceramic population and similarity to nearby sediments indicates that White Marl pottery was locally produced, with the proposed material origin being the Above Rocks Inlier granodiorite. However, some sherds consistently plotted as outliers in the neutron activation analysis, suggesting a different geochemical origin for those few samples. Current analyses are investigating sherds from sites contemporaneous with White Marl to address potential intercommunity relations.

Gleason, Sean [150] see Church, Lynn
 Gleason, Sean [150] see Lim, Jonathan

Glover, Jeffrey [259] see Rubio-Cisneros, Nadia
 Glover, Jeffrey [276] see Tucker, Carrie

Glowacki, Donna [286] see Field, Sean

Gociar, Andre [68] see Arroyo, Valerie

Godhardt, Ava (Independent Scholar), SJ Casillas (University of Colorado, Denver), Jessica Weinmeister (Binghamton University), Troy Brown (Western Colorado University) and David Hyde (Western Colorado University)
[286]

Pomp and Circumstance at an Ancient Maya Village: The 2023 Season at Group M of the Medicinal Trail Community, NW Belize

This poster provides a summary of the 2023 archaeological investigations conducted at and around Group M of the Medicinal Trail Hinterland Community, an ancient Maya site in northwestern Belize. Group M is a nonresidential masonry architectural group located at the north end of the Medicinal Trail Community. It is situated on a knoll, with a sharp topographic drop north, east, and west of the group. It is located on the northern terminus of the ridgetop that also includes formal residential Groups A and B and represents the northern boundary of the community. Initial survey and brief excavations from the 2017 field season indicated the group was atypical of architectural groups from elsewhere in the community, not being residential or a work area associated with terraces. Topographic mapping, drone photography, and courtyard excavations were undertaken. These findings, in addition to others from the 2023 field season, provide evidence for the interpretation of the group as a ceremonial center. This has implications for our understanding of Group M's function and significance within the community, as well as larger implications for ritual behavior among the rural non-elite Maya.

Godhardt, Ava [284] see Baldner, Linnea

Godzinski, Michael and Elizabeth Williams (University of New Orleans)
[131]

New Orleans City Archaeology Initiatives

In 2018, the City of New Orleans hired a full-time archaeologist as part of their \$2 billion FEMA partnership for infrastructure work stemming from the Hurricane Katrina disaster. Monitoring projects have unearthed data concerning the construction of the city's roadways, especially historic paving types and streetcar infrastructure. Colonial or earlier sites within New Orleans's geographical footprint are targeted and given special preference in the federally funded monitoring endeavors, although their identification has been challenging in an environment of heavy disturbance from prior utility and roadway construction. The archaeologist's current priority is administering these 200+ grant-related projects; however, issues involving Section 106, or archaeological resources in general, arise on a regular basis, lending credence to the potential for this position even after this grant. This paper documents the findings from these infrastructure projects: patterns of precontact and postcontact land usage and development, identification of additional target areas with unique historical value, and suggested approaches to better protect or mitigate archaeological resources within the City of New Orleans in the future.

Goebel, Ted [61] see Shelley, Nathan

Goeller, Ana (Cornell University)

[318]

Preliminary Report on the Faunal Material from the Deserted Medieval Village Site in Ballintober, Co. Roscommon, Ireland

This paper presents a preliminary faunal analysis from the deserted medieval village site in Ballintober, Co. Roscommon, in Ireland. Studies on faunal materials from medieval villages during the Anglo-Norman conquest and colonialism of Ireland are currently few, but they are crucial to better understand human-animal interaction in this period of social and political change. This study will illuminate aspects of the daily lives of ordinary people, an area understudied in high medieval Ireland compared to monastic and other castle and elite sites. The preliminary data from the excavated house plot in the village at Ballintober show signs of food processing and a range of domestic species, and the results of the analysis will reveal the animal abundance and diversity within this domestic context. These data will help answer questions about subsistence economies and life histories of the animals in the village. I will also discuss the evidence of modification and processing to draw interpretations about butchery practices and diet, and I will further compare the archaeological data to the historical data. While these results presently concern the earlier layers of occupation, this preliminary report provides new insight into human-animal interaction in medieval villages during the Anglo-Norman occupation.

Golay Lausanne, Kayla (McMaster University)

[248]

Chair

Golay Lausanne, Kayla (McMaster University)

[248]

Settlement Patterns, Urbanism, Neighborhoods: Comparative Perspectives from Grupo Gallinazo and Cerro San Isidro, Coastal Peru

This paper explores the formation, morphology, and neighborhood organization of two early urban settlements on the north coast of Peru—Grupo Gallinazo (~100 BCE–700 CE), Virú Valley, and Cerro San Isidro (~800 BCE–1500 CE), Nepeña Valley. Investigating variations in spatial arrangements and settlements at these two sites allows for a series of comparative insights into urban trajectories along the north coast of Peru. I pay particular attention to the potential of geospatial methods in relation to the different geological, architectural, and other anthropogenic processes at play in site formation and settlement growth. I discuss the results of survey operations at both sites, highlighting their sociocultural implications. Ultimately, the paper highlights the value of comparative analysis in studying ancient urbanism in the Andes and emphasizes the diversity of urban spaces throughout the region.

Goldberg, Kelly (University of South Carolina) and Stacey Young (South Carolina Parks, Recreation, and Tourism)

[150]

Scaffolding Archaeology, Education, and Collaboration at Sesquicentennial State Park, Columbia, South Carolina
Sesquicentennial State Park, built by the Civilian Conservation Corps and opened to the public in 1940, contains multiple archaeological sites representing both precontact and historic occupations. Current archaeological excavations are focused on investigating the history of nineteenth- and twentieth-century African American communities that were present prior to the park's construction and not currently represented in park interpretive narratives. Since May 2022, collaborations between South Carolina Parks, Recreation, and Tourism and the University of South Carolina have developed a collaborative approach centered on educational opportunity and community outreach. This presentation discusses the ways in which collaborations with local descendants and a focus on educational engagement among K–12 and postsecondary

institutes have directed the research design of the Sesquicentennial archaeology project. These collaborations have directly contributed to the development of interpretive materials seeking to magnify the potential community outreach and engage diverse stakeholders throughout the state.

Golden, Charles (Brandeis University)

[213]

Discussant

Goldhahn, Joakim [156] see May, Sally

Goldstein, Avner (Boston College)

[91]

Oceanic Tendencies: Ritual Landscapes, Oyster Shells, and the Social Worlds of Marine Resource Exploitation in Early Medieval Britain

Oyster shells have been discovered across multiple sites in Britain, often as part of shell middens which have been interrupted almost exclusively as food refuse. But whether inland or by the sea, people in Britain had used oysters and other mollusks to help make their religion. Oyster shells were often deposited at many Roman and early medieval ritual sites, including temples, burials, and pits, indicating a long-term and widespread use of oysters as ritual objects. At the same time, isotopic data has suggested that while the diets of some coastal communities were dominated by marine resources in the early medieval period, other people were less interested. This paper thus interrogates the chronology and geographic distribution of ritual oyster consumption and shell deposition within Britain at the end of the Roman period through the early medieval period. Such an approach also situates narrowly focused economic studies of marine resources and their exploitation within a rich social world of late Roman and early medieval sea environments.

Goldstein, Lynne (Michigan State University [Retired])

[204]

Collectors, Public Archaeology, and Regional Surveys: Contributions of Stuart Struever

Stuart Struever developed several important and innovative approaches during his time in Illinois. I use my own Lower Illinois Valley research to focus on Struever's contributions in three areas: 1) working with collectors and amateur archaeologists, 2) focusing on engaging and interacting with the public, and 3) encouraging archaeological surveys of large regions. Many years ago, when I was an undergraduate, Struever had me conduct a study of plummets by interviewing 70 landowners and amateur archaeologists, determining their collector territories, how long they had collected, then examine their collections to see if they had ever found a plummet. I documented a total of 350 plummets with good provenience and with individual collecting territories covering the majority of the region by about 70 years. Struever loved interacting with the public and argued that archaeology had an obligation to inform, engage, and interact with the public in a variety of ways. Having spent a number of years as Struever's assistant, I outline some of his perspectives on public engagement. Finally, Struever consistently argued for a regional perspective, although he did not necessarily understand statistical sampling. Nonetheless, he worked to include the entire Lower Illinois Valley region for many research questions.

Goldstein, Megan (University of Massachusetts, Boston)

[319]

Pequot Subsistence Practices during the Seventeenth Century: A Zooarchaeological Analysis of the Calluna Hill Site (59-73), Groton, CT

Previous studies have provided a baseline for Indigenous subsistence practices in southern New England both before and after European colonization, but there are few archaeological sites that can speak to subsistence

during the early years of colonialism in the seventeenth century. This project uses zooarchaeological analysis and a comparative analytical framework to examine the faunal remains from Calluna Hill, a seventeenth-century Pequot habitation site in Groton, Connecticut, to better understand Pequot subsistence practices and persistence throughout the seventeenth century. Traditional zooarchaeological lines of inquiry were used to identify a list of species, skeletal elements, taphonomy, and depositional processes present at the site. The study further examined the results using intra- and intersite comparison to show the presence, nature, and distribution of faunal remains throughout Calluna Hill and to contextualize the findings in a broader regional discourse. The results provide insight into Pequot subsistence, hunting, butchery, processing, disposal practices, and human-animal relationships during a time of cultural stress and conflict with Europeans and contribute to a more nuanced understanding of Pequot identity, social dynamics, and the broader impact of European colonialism on Indigenous people and their homelands.

Golitzko, Mark (University of Notre Dame), Gary Feinman (Field Museum of Natural History) and Linda Nicholas (Field Museum of Natural History)

[86]

Twenty Years of Mesoamerican Obsidian Research at the EAF

Among the first materials compositionally analyzed at the EAF were obsidian objects from the Maya site of San José, Belize. Since then, we have analyzed tens of thousands of obsidian objects from Mesoamerica (primarily from the Valley of Oaxaca) as part of our study of the ancient Mesoamerican economy. Using these new analytical results as well as a comprehensive database of other sourcing studies for the region, we have documented large-scale shifts in the transport and acquisition of volcanic glass indicative of changes in political geography and transport routes between ca. 1600 BC and AD 1520. Here, we revisit the results of our prior network analyses using distance fall-off curves. These new analyses illustrate the role that political geography played in the distribution of obsidian in Mesoamerica, for instance, the selective acquisition of Pachuca obsidian by political allies of Teotihuacan during the early Classic or the role of the Tula and Chichen Itza in the distribution of Ucareo obsidian during the Terminal Classic period. However, in common with our prior analyses, we find that obsidian was likely moved through a number of channels and routes in Mesoamerica, often independently of direct political control over production and distribution.

Golubtsov, Viktor [93] see Buvit, Ian

Gomez, Francisco [283] see Ferguson, Jeffrey

Gomez, Melissa

[278]

Chair

Gomez, Melissa and Peter Sinelli (University of Central Florida)

[278]

The Lucayans and Their Rodents: Precolumbian Hutia Management in the Bahama Archipelago

The Lucayan Taino of the Bahama archipelago actively bred and managed the hutia rodent (genus *Geocapromys*) for centuries before the arrival of Europeans. Seven field seasons of excavations at the precolumbian Lucayan site of Palmetto Junction on Providenciales, Turks & Caicos Islands have produced exponentially more hutia skeletal material than has been collectively recovered from all other archaeological contexts in the Bahama Archipelago combined. Analysis of a representative sample of these remains via zooarchaeology by mass spectrometry (ZooMS) has established that many individuals in the Palmetto Junction hutia population were of nonlocal species endemic to the Greater Antilles, thus demonstrating that a culture of hutia translocation and management was well established in the Lucayan world. The presentation will discuss the results of ZooMS analysis on 75 individual hutia samples, temporally contextualized via a

robust sample ($n = 20$) of correlated AMS dates. This multivariate analysis is funded by an NSF DDIG, and is developing the most comprehensive timeline of human translocation, management, and exploitation of *Geocapromys* sp. ever attempted in the West Indies

Gomez Mejia, Juliana [188] see Rincon Jaramillo, Ana

Gomez Rendon, Jorge (Pontificia Universidad Católica del Ecuador)
[220]

La Ocupación Barbacoa de la Sierra Norte del Ecuador: Una revisión de la evidencia toponímica

La única evidencia lingüística disponible de los idiomas que se hablaron en la Sierra Norte del Ecuador en los albores de la conquista inca se encuentra en la toponimia no-kichwa ampliamente dispersa en la región. Durante la primera mitad del siglo XX investigadores como Paul Rivet (1907), Jacinto Jijón y Caamaño (1940, 1941), Carlos Emilio Grijalva (1947, 1988) y Telmo Paz y Miño (1960, 1961) recogieron y compilaron copiosa información toponímica de la Sierra norte, la misma que hoy debe ser analizada a la luz de los nuevos hallazgos de la etnohistoria, la arqueología y la lingüística histórica a fin de trazar con mayor precisión la ocupación barbacoa en la región así como los contactos que mantuvieron los hablantes de lenguas barbacoas en la Sierra norte con otros de origen etnolingüístico kichwa, sobre todo desde la primera mitad del siglo XVI. En esta presentación expondremos los resultados de nuestro análisis más reciente de la evidencia toponímica para la Sierra norte, cotejándolos con datos etnohistóricos y arqueológicos para concluir con una propuesta cartográfica de las principales marcas toponímicas barbacoas que nos permita deslindar con claridad su distribución geográfica.

Gómez Vázquez, Josue [230] see Hernandez, Christopher

Góngora-Salas, Angel [114] see Ibarra, Thania

Goni, Rafael (Instituto Nacional de Antropología/UBA)
[77]

Discussant

Gontarski, Sarah (Yale)
[117]

Changes in Decoration through Time: An Analysis of Salinar Pottery found in Huanchaco, Moche Valley, North Coast of Peru

The late Early Horizon (400–200 BCE), also known as Salinar in the north coast of Peru, was a key moment immediately after the influence of the Chavín de Huántar sphere of interaction. Salinar pottery bears distinct designs and motifs that have never been properly studied. This paper presents a first systematic analysis of the varied decorative designs on ceramics found on Salinar occupational levels at the ceremonial site of Jose Olaya-Iglesia Colonial in Huanchaco. This analysis focuses on changes in decoration through time along with the frequency of designs by burial contexts based on gender. These changes may reflect functional, environmental, political, ritual, or cultural factors. Overall, the distinctive white-on-red ceramic style of the Salinar period traces a distinctive timeline of change that can tell us more about the sociocultural aspects of this period and lived experiences through painted, carved, applied, and sculpted designs on the pottery.

Gontz, Allen [310] see Kelley, Alice

Gonzalez, Albert (Cal State University, East Bay)**[15]**

Chair

Gonzalez, Albert (Cal State University, East Bay)**[15]***The Abandoned Intersection: Race and Class and the Diversification of Archaeology's Ranks*

Archaeologists are quick to connect race and class in conversations about the dead. However, in our discussions of the living—especially on BIPOC archaeologists and their work—class takes a backseat to race, an outcome I call “wealth blindness.” I argue that, as professional archaeologists working to diversify our ranks, we owe it to our descendant constituencies, students of color, and BIPOC colleagues to re-couple wealth and race. I further argue that the rhetoric of Community Cultural Wealth (CCW), despite its well-deserved reputation for spurring equity in student and professional success, sometimes serves inadvertently to encourage wealth blindness among us. CCW’s theorization often obscures wealth gaps between those BIPOC populations that successfully break into archaeology and those that never attempt it in the first place, despite population-wide interest. I present anecdotal evidence to support these points, offering narrative fragments from my own experience as a hood-raised Latinx archaeologist and formerly incarcerated high school dropout. In doing so, I hope to encourage my colleagues to dedicate time and resources to rerouting BIPOC school-to-prison pipelines toward our field and to opening their eyes to wealth in the recruitment of BIPOC archaeology prospects at all levels.

Gonzalez, Alejandra [159] see Canuto, Marcello

González, Cristian [28] see Saintenoy, Thibault

Gonzalez, Edith (University at Buffalo SUNY)**[148]***We Carry It within Us: Shared Colonial History and Control of Caribbean Cultural Heritage Collections*

To quote James Baldwin, “History, as nearly no one seems to know, is not merely something to be read. And it does not refer merely, or even principally, to the past. On the contrary, the great force of history comes from the fact that we carry it within us, are unconsciously controlled by it in many ways, and history is literally present in all that we do. It could scarcely be otherwise, since it is to history that we owe our frames of reference, our identities, and our aspirations.” From the seventeenth century to the nineteenth century, the Caribbean underwent an intensive process of colonization, where islands frequently changed hands between European powers, yet were primarily occupied by Indigenous and Afro-Caribbean peoples. This begs the question who should control cultural heritage collections when multiple and sometimes competing communities of relevance can make a viable claim to a shared history. This paper examines the access to collections held off island, concerning shifting ecologies which are a cornerstone of modern Barbudan culture and identity.

Gonzalez, Juan [45] see Skowronek, Russell

Gonzalez, Manuel Ramon [247] see Gelabert, Pere

Gonzalez, Nicholas (University of Connecticut)**[199]***Settling the Score: A Comparative Mesowear Analysis Using Qualitative and Quantitative Methods on Capra aegagrus Teeth*

The study of mesowear on ungulate teeth is a useful tool for reconstructing environmental conditions. The method has seen several improvements over the past decade, resulting in its increased applicability to a greater number of species and dental elements as well as the development of fine-tuned digital measuring techniques. Recent mesowear studies have attempted to quantify the method to address concerns of subjectivity, research bias, and replicability with the original scoring method. This prompts questions about which application of the method is “better,” if this distinction is meaningful, and which application more accurately depicts paleoenvironmental signals. In this study, I assess two mesowear methods: the traditional scoring method devised and improved on by Fortelius et al. and the more quantitative measuring method proposed by Jiménez-Manchón et al. by applying them to the wild goat assemblage from the Early Epipaleolithic site of Wadi Madamagh, Jordan. Although the quantitative method has been proposed to be more precise, it proved difficult to replicate, reducing its efficacy. Comparing the methods resulted in conflicting paleoenvironmental signals, which are addressed here.

González, Paola [37] see Echenique, Ester

Gonzalez, Sara (University of Washington, Seattle)

[182]

Moderator

[182]

Discussant

González, Soledad [178] see Garrido, Francisco

González-Álvarez, David (Institute of Heritage Sciences [INCIPIT-CSIC])

[28]

Mountainous Landscapes in NW Spain: An Archaeological Examination of Current Debates about Rewilding, the Anthropocene, and the Culture-Nature Divide

I envision Landscape Archaeology as a scientific program, comprising interdisciplinary methods and theories, that rigorously analyzes the long-term processes of landscape formation. This approach integrates archaeological, paleoenvironmental, and ethnographic datasets to produce socially relevant knowledge about human behavior, delving into the social, productive, and symbolic aspects of societies. The potential of Landscape Archaeology for establishing theoretical connections with other disciplines among social and Earth sciences is broadly assumed by its practitioners, although it might not be clear enough beyond the boundaries of our field. Archaeologists should pay more attention to contemporary issues related to landscape management and policies. We can strengthen claims for the adoption of measures pursuing global citizenship and social justice, based on the promotion of critical thinking among better-informed citizens. We cannot leave behind local communities living in rural areas, usually ignored by governance bodies. This paper relies on my ongoing investigations of rural landscapes in the Cantabrian Mountains (NW Spain), examining the role of pastoralism in the anthropization of upland areas since late prehistory. It constitutes a fruitful horizon to inform policymaking on tourism, heritage and land-use management, challenging the nature/culture divide in public perceptions about landscapes and enriching discussions around the Anthropocene or rewilding.

Gonzalez Carretero, Lara (University of York)

[12]

Mesolithic and Neolithic Recipes under the Microscope: A Comprehensive Approach for the Study of Archaeological Food Remains

Research into food in archaeology has traditionally focused on the potential resources and ingredients from the identification of recovered plant and animal remains, as well as cooking technologies including pottery,

ground stone tools, fire installations, etc. However, the different processes behind the preparation of food and meals have only recently started to be disentangled. Advances in the application of coherent and cohesive methodological approaches involving different types of high-resolution microscopy (digital microscopy and scanning electron microscopy) in combination with organic residue analysis (ORA) have enabled the successful identification of a variety of archaeological food remains, shedding light on past food choices and cuisine. These methods have provided a new means of characterizing archaeological assemblages with charred food remains present as representative of past “recipes,” allowing the study of the *chaîne opératoire* of food, which links plants and animals to cooked products for consumption. This paper presents methods and results from the study of Mesolithic and Neolithic food remains from a variety of geographical regions, from Iberia to East Asia.

González Chablé, Daniela [83] see Novelo Pérez, María J.

Gonzalez Esteban, Cristina (University of Oxford), James Bacon (Trent University) and Angel Morales Sanchez (Universidad Politecnica de Madrid)
[321]

The Usage of Levels of Detail in Lidar Survey to Increase the Digital Applications on Maya Archaeology.

The advantages of lidar survey applied to the identification of archaeology under forested areas has been evident since the early twenty-first century. Most lidar studies have been done by placing the laser devices on aircraft, and in more recent years, drones. However, this is still quite an expensive endeavor that relies on several variables to succeed (forest density, number of pulses, weather, etc.). In this research, we test different lidar sensors (drone, hand-held, and close-range) to locate and document the ancient Maya architectural remains at and around the sites of San Clemente, Zapote-Corozal, Quemada-Corozal, and Torre-Corozal, both protected under the forested canopy and left exposed on the open fields. We aim to achieve and display lidar in a range of levels of detail to balance the possibilities and needs of lidar survey in order to interpret and understand the Maya remains, at small and large scales. Our research has proven that these methods are complementary and can benefit the creation of a solid ground base for the application of the incipient technologies such as the creation of digital twins, the application of sourced-based 3D digital archaeology, and the new functions that come with the usage of machine-learning codes.

González-García, Cesar [28] see Saintenoy, Thibault

González-Hernández, Galia [152] see Beramendi-Orosco, Laura

Gonzalez-La Rosa, Luis Manuel (Archaeology Centre, University of Toronto), Stefanie Wai (University of Toronto), Alannagh Maciw (University of Toronto) and Aleksa Alaica (University of British Columbia)
[30]

States of Vulnerability: Examining Moche-Era Practices of Care in Life and Death

The way that communities cared for their living and dead holds great potential to elucidate the cosmovision of the Moche. Ritual practices during the Moche period involved human offerings that include women, children, and men at different stages of life. At the Late Moche site of Huaca Colorada, many of the 29 human burials from distinct contexts demonstrate that their involvement in these depositional events was due to their state of vulnerability. We define a “state of vulnerability” as a phase of time when an individual requires greater care due to age, illness, or pregnancy. In this paper, we examine several examples for the way that practices of care create and reinforce ritual significance during phases of renovation and maintenance of the physical and emotional health of the site. Mobilizing frameworks from bioarchaeology of care and socio-emotional theory, we argue that the time required to care for individuals in these vulnerable states while

alive sacralized their deaths. The diverse life stages of the burials from Huaca Colorada highlight the varied experiences for communities living at the site and their investment in caring for their loved ones in both life and death.

Gonzalez-La Rosa, Luis Manuel [30] see Alaica, Aleksa
Gonzalez-La Rosa, Luis Manuel [268] see Ren, Kara

Gonzalez Lauck, Rebecca (INAH Tabasco)
[292]

Discussant

González López, Ángel (North Carolina Museum of Art) and Nelda Marengo Camacho (Boundary End Archaeology Research Center)
[79]

The Presence of Sacrifice in Chichen Itza and Tenochtitlan: Two Faces of the Same Story

In Chichen Itza and Tenochtitlan's religious thought, sacrifice was a creative act closely related to cosmic genesis and world sense. This behavior is evident not only in the archaeological record but also in the iconography. Two of the most common artifacts associated with this ancient practice in both cities are sacrificial stones used for heart sacrifice rites: the polyhedral artifact known as *techcatl* and the Chac Mool, a human figure seated, with the upper back raised, legs drawn up to the buttocks, and hands holding a vessel, disk, or plate. At Early Postclassic Chichen Itza, architectural and other material cultural evidence suggests that victims' blood was offered to the bellicose solar deity, whose daily journey through the sky depended on such liquid. During the Late Postclassic Tenochtitlan, there was a similar militaristic ideology; however, it also included the earth deity, Tlaltecuhli, as the other primary recipient. This paper aims to draw attention to the similarities and disparities between both sites. We relied on analyzing sculptures, historical texts, iconography, and other information found in the material culture. We suggest that the Flower World—a floral spiritual domain—ideology is present in both cities and shows more commonalities than differences.

Gonzalez-Morales, Manuel [247] see Straus, Lawrence

Gonzalez Rodriguez, Cristian (University College London), Bill Sillar (University College London) and Thibault Saintenoy (Instituto de Ciencias del Patrimonio [Incipit-CSIC])
[185]

Landscapes and Chronology of the Chullpa Phenomenon within the Lauca Basin (18°S)

The Carangas region, named after a late prehispanic and early colonial chiefdom in Qollasuyu (south-central Andes), preserves over 600 chullpa mausoleums associated with walled hilltops, administrative centers (tambos), and regional movement routes. Carangas's chullpas exhibit a great diversity of architecture, as well as geographical and territorial settings. The highest concentration of chullpas is found in the Lauca basin, a high-altitude and low-demography region, with clusters including adobe constructive traditions, exceptional polychrome paintings, and Cuzco-style stone masonry. Supported by the UCL IoA PhD program and the Redes andinas project (Incipit-CSIC), this study is carrying out a regional approach in the Lauca basin to research the variability of chullpas' chronology and landscape setting within this region. On the one hand, an AMS radiocarbon dating protocol reveals the diachrony of the chullpa phenomenon from the Late Intermediate period through the colonial period. On the other hand, computational modeling of chullpas' architectural and locational characteristics has allowed us to assess chullpa placemaking's rationales, which seem to have changed over time. By examining both chronological and locational variations, this research aims to discuss the role chullpas played in ancient landscapes, bringing together the living, the ancestors, the mountains, water sources, and agricultural fields.

Gonzalez-Tennant, Edward (University of Texas Rio Grande Valley)**[65]***Discussant*

Gonzalez-Tennant, Edward [197] see Ramirez, Benjamin

Gonzalez-Tennant, Edward [45] see Skowronek, Russell

González-Varas, Marina (Museum d'Histoire Naturelle) and Antonio Pérez-Balarezo (Pontificia Universidad Católica del Perú)**[9]***Tracing Paleoamerican Adaptations to South American Tropics: New Data from Lithics Analyses in Brazil*

Recent archaeological findings in the neotropical region of South America are central to understanding the early adaptations of Paleoamerican populations to diverse ecosystems, especially tropical areas, between 14,000 and 9000 BP—a period marked by significant paleoenvironmental and paleoclimatic shifts. This study focuses on the critical role of lithic technology in unraveling the subsistence strategies of the first human groups. Recent 3D morpho-technological analyses on lithic assemblages from cerrado and Amazonia biomes have revealed a variety of toolkits, including bifaces and multifunctional unifacial artifacts, highlighting a deep-seated relationship with the region's ecological mega-diversity. These new data, particularly concerning “plano-convex” artifacts, indicate not just a culture significantly geared toward plant exploitation and medium game hunting but also the potential engagement in early soil and forest modifications, showcasing previously unknown levels of adaptability and technological sophistication. Our presentation will further explore these groundbreaking discoveries, offering a nuanced perspective on Paleoamerican adaptations during a critical period of human settlement, emphasizing the complex interactions with diverse neotropical biomes during the Pleistocene-Holocene transition. This research invites a reassessment of the historical understanding of settlement processes in South American tropical regions, adding depth to the depiction of early human adaptive strategies and technological advancements.

Goodman, Elizabeth [105] see Foe, Aldo

Goodman, Reed (New York University) and Paul Zimmerman (University of Pennsylvania)**[60]***Using Ramped Pyrolysis and Oxidation (RPO) to Date and Characterize Geoarchaeological Deposits: A Pilot Study from the Ancient Mesopotamian City of Ur*

Geoarchaeological sediments represent robust archives of human-environment interactions. Given the growing importance of paleoenvironmental research in anthropology and the absence of critical chrono-stratigraphic and ecological evidence from challenging contexts/regions, opportunities to refine chronological frameworks through novel instrumentation are desirable. We report on the application of a uniquely suited thermal fractionation method, ramped pyrolysis and oxidation (RPO), to extract chronological and paleoenvironmental proxy data from geoarchaeological samples when coupled to radiocarbon and stable carbon analyses. RPO, developed at the National Ocean Sciences Accelerator Mass Spectrometry (NOSAMS) facility in Woods Hole, MA, was initially created to date and explore the chemical composition of carbon-poor sediments from the Arctic seafloor. As a proof of concept, we used RPO to analyze recently collected sediment samples from exposed archaeological sections at Ur, Tell Muqayyer, an important Mesopotamian city in southern Iraq. Sir Leonard Woolley excavated deep pits at Ur in the 1920s and dated their strata through ceramic sequencing. Ultimately, we compared RPO results with Woolley's interpretations to evaluate the method's potential for chronology building in archaeology. We also discuss the prospects and limitations of RPO more broadly based on additional measurements from the site and region.

Goodsell, Joanne (US Army Corps of Engineers)**[4]***Mindful Mitigation: Reconceptualizing the Resolution of Adverse Effects through Considered Consultation*

To comply with Section 106 of the National Historic Preservation Act, federal agencies are required to consult with the State Historic Preservation Officer, Native American tribes, and other parties to seek ways to avoid, minimize, or mitigate the adverse effects of their undertakings on historic properties. Historically, archaeologically driven standard mitigation measures for resolving adverse effects to Native American archaeological properties have comprised excavation for data recovery, destructive analysis, and long-term curation requirements, regardless of input from consulting tribes. Increasingly, the rote application of standard archaeological approaches to Section 106 mitigation is being challenged by Native American descendant communities, who dispute the notion that meaningful consultation has occurred when the outcome continually favors scientific inquiry over the cultural values and beliefs, and scientific knowledge and wishes, of Indigenous people. Prompted by our tribal partners, the US Army Corps of Engineers, Sacramento District, is moving toward more approaches to mitigation on civil works construction projects that involve and acknowledge tribal knowledge and preferences. This presentation focuses on some of these projects, the contexts within which alternative mitigation needs were determined, and the positive outcomes achieved through a more collaborative, thoughtful, and anthropological approach to Section 106 compliance.

Goodwin, Graham [321] see Rissolo, Dominique

Goodwin, Whitney (Archaeometry Laboratory at the University of Missouri Research Reactor)**[255]***Feasting, Shell Middens, and Monumentality in Northeastern Honduras*

At the site of Selin Farm (AD 300–1000) in northeastern Honduras, recent research revealed repeated episodes of large-scale feasting occurring over a period of nearly a thousand years leading up to major shifts in local social and political organization (Goodwin 2019; Reeder-Myers et al. 2021). Shell midden mounds at the site contain large deposits of well-preserved pottery, lithics, and faunal remains disposed of as part of feasting events, including one artificial mound that represents the earliest example of monumental architecture in the region. Feasts have been identified as arenas where local politics are played out—emergent leaders use these performances to merge long-standing traditions and new rituals (and ritual objects) in an effort to alter their social standing. By focusing on feasting contexts and evaluating the origin of the pottery used in these settings via compositional studies using neutron activation analysis, the current study aims to bring together information on participation in regional exchange systems and emerging complexity in northeastern Honduras to understand how these two significant sociocultural changes were intertwined in the past.

Goodwin, Whitney [122] see Figueroa, Alejandro

Goodwin, Whitney [285] see Hollenback, Kacy

Goodwin, Whitney [276] see Khaghani, Victoria

Goodwin, Whitney [213] see Sullivan, Lauren

Gordon, Gwyneth [288] see Biwer, Matthew

Gordon, Jody (Wentworth Institute of Technology)**[17]***Between Alexandria and Rome: World-Systems Analysis, Globalization, and Processes of Social Change in Hellenistic and Roman Cyprus*

In 2007, a children's book about Cypriot history entitled *The Island that Everyone Wanted* was published.

Despite being aimed at a juvenile audience, this title aptly encapsulates the history of Cyprus, i.e., as an island

coveted by imperial polities from the Assyrians to the British. Throughout this nearly 3,000-year period, imperial states were drawn to Cyprus to extract and manipulate its *longue durée* values, especially its metallic and agricultural resources and/or its strategic location along trade routes and between Mediterranean and Near Eastern states. Because of Cyprus's historical situation as a frequent imperial possession intertwined with large-scale macroeconomic and political networks, Wallerstein's world-systems theory has proven to be an effective analytical framework to explore how local society changed during eras of premodern, "world-system"-level connectivity. Two eras particularly salient for such analyses are the Hellenistic and Roman periods, when two economically exploitive, yet politically diverse, imperial states (the Ptolemies and the Romans) manipulated Cyprus as a peripheral possession from the cores of Alexandria and Rome. Through a comparative archaeological analysis of coinage, sculpture, and architecture, this paper assesses the continued utility of world-systems and globalization approaches for understanding premodern processes of social change in Hellenistic and Roman Cyprus.

Gore, Angela [138] see Lynch, Joshua

Gorero, Naomi [68] see Giblin, Julia

Gorman, Alice [207] see Walsh, Justin

Gorring, Matthew [287] see Glaser, Vanessa

Gorringe, Josh [256] see Harding, Makayla

Gorringe, Trudy [256] see Harding, Makayla

Gotchie, Marcie [153] see Dunham, Sean

Goto, Akira (Nanzan University), Kazuhiro Sekiguchi (National Astronomical Observatory of Japan), Kuninori Iwashiro (scienceNODE) and Yoshitaka Hojo (Tokai University)
[239]

Cosmology and Lunar Calendar of a Prehistoric Rice Farming Society in Japan: An Experimental Simulation with arcAstroVR

In Japanese prehistory, the foraging of the Jomon economy was followed by the Yayoi period, which was based on rice cultivation and metal tools introduced from China. During the Yayoi period, social stratification developed, and small chiefdoms arose in western Japan. According to Chinese records of one such chiefdom, Yamataikoku, the solar year was divided into two seasons, spring and fall. The Yoshinogari site (300 BC–AD 200) in northern Kyushu Island is one of the most important sites as a settlement corresponding to this period. To evaluate speculations on cosmology and calendar, we developed arcAstro-VR, which uses Unity as a 3D engine with sky, terrain, and 3D object data by lidar survey and reproduces them in VR space. The simulation of celestial bodies uses the plug-in function of Stellarium. As a result, the relationship between the Northern Tombs and Mt. Unzen Fugen, over which Canopus and Southern Cross shone in winter, was confirmed. On the other hand, the axis of the Northern Inner Enclosure coincided with the direction of the appearance of the full moon near the winter solstice during the high moon period, which repeats every 18.6 years. This suggests that moon-reading was practiced as an agricultural calendar.

Gottwald, Emiley [101] see Erter, Isabella

Goudiaby, Hemmamuthé [61] see Mereuze, Remi

Gougeon, Ramie and Gregory Cook (University of West Florida)
[57]

Building Capacity: Educating and Training Submerged Terrestrial Archaeologists

In spite of an increased interest in submerged terrestrial landscapes and an increased need for trained professional archaeologists to support offshore energy development projects, educational programs in the advanced survey technologies, analytical software and methodologies, and educational coursework necessary to discover and interpret submerged landscapes remains in a nascent stage of development. Faculty with the University of West Florida contributed educational outreach opportunities to support a NOAA grant awarded to explore paleolandscapes and the ca. 8000 BP shoreline of the outer continental shelf of the western Gulf of Mexico. These educational and training activities included graduate student support, high-impact educational practices, and mentorship and training in basic analytical techniques on samples derived from the grant-supported fieldwork. Additionally, a course in submerged terrestrial archaeology was offered to professionals and students in August 2022. Over several days, working professional archaeologists and scholars presented overviews of cultural historical contexts as well as lectures on submerged site modeling and discovery. Course participants were asked to consider what a successful submerged terrestrial higher educational program might include. This paper summarizes the results of these activities and more specifically considers the challenges of standing up a program in submerged terrestrial archaeology at a regional comprehensive university.

Goulding, Ella (University of Illinois, Urbana-Champaign), Anena Majumdar (University of Illinois, Urbana-Champaign), Hwajung Kim (University of Illinois, Urbana-Champaign) and Erin Riggs (University of Illinois, Urbana-Champaign)
[166]

The Blurred Line between Insider/Outsider Positionalities

There has been a serious reckoning with problematic histories in our discipline, which have involved extractive research—outsiders' removal of objects and knowledge from local communities. Increasingly, researchers are attempting to address the harms perpetuated by these histories by better serving communities. Often, however, insider/outsider positionality is not so binary. It can be challenging to ethically determine whose perspectives to champion and to come to terms with the ways our own unique positions along the insider/outsider spectrum impact research goals. In this paper, four early-career archaeologists critically consider their multidimensional positionalities. The first studies the material legacies of the Manhattan Project in Oak Ridge, Tennessee, and reflects on her relationship to the topic as the daughter of a resident physicist. The second, an India born researcher, negotiates her class positionality in the study of material culture associated with Bengali identity in various socioeconomic and international contexts. The third seeks to promote inclusive heritage interpretations of the legacies of Japanese colonial rule in twentieth-century East Asia. The fourth, a pro-immigrant researcher from the global north, studies refugee resettlement in the global south. Their examples demonstrate the complexity of outsider/insider positionalities and speak to the limitations of relying on “serve-the-insiders” approaches.

Grace, Kristen [229] see LeFebvre, Michelle

Graesch, Anthony (Connecticut College)
[304]

Chair

Graesch, Anthony (Connecticut College)**[304]***Human-Object Severance: Archaeological Interventions in Contemporary Material Flows and Massive Discard*

After decades of aspirational spending, and in houses brimming with tens to hundreds of thousands of objects, North Americans have amassed inventories of belongings that are extraordinary for their scale and complexity. In a process largely devoid of ritual, these lifelong-amassed collections are often thoroughly purged from domestic architecture at the conclusion of homeowners' lives, dropping out of time and memory. Building on Jeanne Arnold and colleagues' archaeological ethnography addressing the material worlds of American families, this presentation considers whether we owe anything to the objects that once constituted the social lives of households. I highlight two pilot studies where researchers staged archaeological interventions in seldom-seen bureaucratic "flows" of waste for the purpose of isolating massive domestic discard events. Such interventions, I argue, afford an examination of relational materialities seldom enjoyed in other archaeological contexts and thus are essential to developing an anthropological understanding of the dissolution or severance of human-object relationships. Drawing on several datasets, I problematize the classic archaeological notion of "systemic" and I operationalize more recent conceptualizations of "assemblage." Finally, I reflect on the ways that discarded possessions "haunt" the past and the present when their social lives are reanimated in the context of archaeological research.

Graf, Kelly [20] see Potter, Bethany

Graf, Kelly [61] see Shelley, Nathan

Gragson, Ted (University of Georgia)**[233]***Chair***Gragson, Ted (University of Georgia), Lydia Allué Andrés (Universidad de Zaragoza), Victor Thompson (University of Georgia), Faith MacDonald (University of Georgia) and Brett Parbus (University of Georgia)****[233]***Mercadal from the Onset of Settlement through the Medieval Crisis in Southern Aragon (Spain)*

San Miguel de Mercadal is one of 23 villages abandoned in the late fifteenth century during the Medieval Crisis in the Comunidad de Aldeas de Daroca created AD 1248 to encourage resettlement and self-defense of the southern borderlands of the Kingdom of Aragon. In 2023 we conducted a geophysical and satellite survey of Mercadal and its surroundings combined with shovel testing, surface collection, limited excavation, and recovery of datable material. The 5 ha village is delimited by a water canal and stone embankment and includes tightly spaced stone foundations of functionally distinct structures linked by interior pathways centered on a Romanesque chapel still used by local residents. Modeled radiocarbon dates from 2023 indicate settlement beginning AD 771–889 coinciding with Banu al-Muhajir control of the upper March of Al-Andalus from the fortified city of Daroca, which contrasts with both the narrative history presenting the region as vacant until liberation from the Moors and the earliest documented reference to Mercadal in AD 1280. Morphometric analysis of the area surrounding Mercadal revealed varied water management features and different land types that social memory and documentary evidence indicate are associated with agropastoral activities since at least Mercadal's inclusion in the Comunidad de Aldeas.

Gragson, Ted [301] see Allué Andrés, Lydia

Graham, Caroline, Lia Kitteringham (Colorado State University) and Edward Henry (Colorado State University)**[232]***A Geoarchaeological Examination of the Elijah Bray Site: Exploring the Extent of the Pinson Landscape, West Tennessee, USA*

Pinson Mounds, located along the South Fork of the Forked Deer River (SFFDR) in West Tennessee, is considered the largest Middle Woodland (ca. 200 BCE–CE 500) ceremonial center in the Southeast. Containing at least 13 earthworks, the site provides important opportunities to examine complex social and environmental interactions among societies across the Eastern Woodlands. However, Pinson represents only one collection of earthworks along the SFFDR. Private ownership of the Elijah Bray Site, a satellite property 8 km to the southeast and containing two known conical mounds, has hindered archaeological understanding of the overall Pinson Landscape. Growing relationships with landowners have provided access to the site. This presentation will discuss data obtained from recent geophysical surveys and lidar analyses of Elijah Bray. We will also discuss analyses of a bulk soil sample column collected from a road-cut soil profile adjacent to Mound I that included particle size analysis, sequential loss-on-ignition, and magnetic susceptibility to test whether this exposed profile represents human landscape modification. Findings from this study expand our understanding of how Indigenous peoples interacted with their environments across the SFFDR, allowing us to lay the foundations for a landscape biography of the wider Pinson Landscape.

Graham, Caroline [328] see Kitteringham, Lia

Graham, Elizabeth (UCL Institute of Archaeology)**[21]***Chair***Graham, Elizabeth (UCL Institute of Archaeology)****[59]***The Spurious Claim of “Human Sacrifice”*

Almost without question, “human sacrifice” is held as a legitimate concept by archaeologists—and the public. The concept is widely employed to explain aspects of Mesoamerican behavior. In this presentation, I argue that human sacrifice was never a Mesoamerican practice, that human sacrifice did not exist as a concept in Mesoamerica, and finally, that the concept of “human sacrifice”—the killing of a human to please a god—is bogus. Taking the life of an individual for a god was never a primary motive for socially sanctioned killing in Mesoamerica, or anywhere.

Graham, Elizabeth [251] see Chase, Adrian

Graham, Elizabeth [251] see Chase, Diane

Graham, Elizabeth [251] see Houk, Brett

Graham, Elizabeth [226] see Saldaña, Gabriela

Graham, Shawn (Carleton University) and Damien Huffer (University of Queensland)**[300]***A Role for the Machine, or, Computer Vision, Artificial Intelligence, and Some Humans in the Loop Studying the Human Remains Trade*

Human remains are traded openly across social media and the wider web. The posts that accompany these texts are sometimes graphic, often disrespectful, and normally afford no dignity to the dead. The imagery can similarly show no real respect for the dead or descendant communities. One role that computer vision or other artificial intelligence techniques can have in this situation is to do the looking, the reading, for us, to reduce the impact on the mental health of the researcher. On the other hand, this creates a certain distancing: what is the correct balance? In this paper I discuss various approaches we have used, their potentials and their perils, and discuss some of our experiments in teaching the machine to see like a

bioarchaeologist, to read like a digital humanist. I conclude with some initial experiments with large language models, asking what role generative AI might have in this research.

Graham, Shawn [300] see Huffer, Damien

Graham, Shawn [207] see Walsh, Justin

Grant, Christopher (University of Chicago)

[131]

From Feathers to Teeth: Remaking the Natural World on an Early Creole New Orleans Plantation

Throughout the colonial period, plantations played an important role in shaping the social and economic landscape of early New Orleans. Though rarely considered as part of the urban fabric, these plantations relied on localized geographies while fostering the growth of distinct economies and contributing to the development of New Orleans Creole culture. This paper examines everyday objects found on a late colonial plantation in the neighborhood of Faubourg Tremé to reconsider the significance of the plantation in the city's colonial history. From feathers to teeth, archaeological assemblages reveal how plantation residents—both free and unfree—relied on mundane objects and the natural landscape to shape emerging Creole aesthetics and identities in the eighteenth- and early nineteenth-century city.

Grant, Leah (Fort Irwin Cultural Resources, DPW Contractor)

[270]

Chair

Grant, Leah (Fort Irwin Cultural Resources, DPW Contractor) and Scott Kirk (Fort Irwin Cultural Resources, DPW Contractor)

[270]

Monitoring At-Risk Archaeological Features Using Phone-Based Lidar at Fort Irwin National Training Center, California

In 2002, the Installation Archaeologist at Fort Irwin National Training Center began an “Off Limits Monitoring” (OLM) archaeological site monitoring program to assess at-risk sites for disturbances and to provide recommendations on how to reduce risk and protect these sites in the training areas of Fort Irwin. A robust live-fire military training program, climate change, and the rugged environment of the Mojave Desert itself have created unique challenges for effectively monitoring these protected sites. Auxilo Management and Ayuda Companies contractors for the Department of Public Works (DPW) are working with the Installation Archaeologist to find innovative ways to track and evaluate these changes and risks over time. This poster presents data from a new, multiyear initiative using phone-based lidar units to track changes in high-risk site features over time. Using an iPhone 14 Pro, we scanned four features—(1) petroglyphs, (2) a sniper's nest from World War II Era military training activities, and (3) two thermal features at risk due to erosion and active alluvial sediments—using the Scaniverse App. Sites were rescanned five months later with results assessed using the program Cloud Compare to determine a schedule for future monitoring efforts.

Grant, Vernelda (San Carlos Apache Tribe)

[144]

Discussant

Gratuze, Bernard [162] see Sánchez De La Torre, Marta

Grau, Esteban [278] see Hernandez-de-Lara, Odlanyer

Grauer, Kacey (Stanford University)**[275]***Hydro-Social Transformations and Economic Realities at Aventura, Belize*

This paper presents legacies of water supplies at the Maya site of Aventura, in northern Belize. During its ancient occupation, Aventura was a city with ample water resources integrated into its settlement. Access to this water was not restricted by economic status as local political ecology was organized heterarchically. In 1848, refugees of the Caste War in Mexico established small villages in the area. Oral histories indicate that water was managed at the household level, as people grew rice and fished in waterlogged landscape. By the end of the nineteenth century, the landscape had dried out due to a combination of deforestation and sugar cane monoculture, both fueled by colonial interests. Today, sugar cane fields dominate Aventura, except where the land remains too wet for this “thirsty crop” to thrive. These legacies make for complex heritages: while local NGOs seek to revitalize Maya agricultural ceremonies, livelihoods remain intricately entwined with the colonial sugar cane industry. By examining these diverse historical contexts and their reverberations, the water supplies at Aventura demonstrates how intricate ecological, political, and economic dynamics continue to shape the region.

Grávalos, M. Elizabeth (Stanford University) and David Chicoine (Louisiana State University)**[50]***Ceramic Paste Technologies at Cerro San Isidro, Nepeña Valley, Peru (ca. 500 BCE–1470 CE)*

Here we present the preliminary results of geochemical and petrographic analysis of ceramics from the site of Cerro San Isidro, located in the Nepeña Valley of Ancash, Peru. Cerro San Isidro was the principal urban settlement within the Moro Pocket of the Nepeña Valley throughout its history, which spanned the final Formative period through the Late Intermediate period (ca. 500 BCE–1470 CE). To understand ceramic production and exchange during the site’s occupation, we conducted laser ablation–inductively coupled plasma–mass spectrometry ($N = 117$) and petrographic thin section analysis ($N = 100$) on pottery fragments from excavated contexts. Our ceramic sample consists of various styles spanning the site’s use, including Circle-and-dot, Post-fire scratched, Pattern-burnished, Recuay kaolin positive painted, Casma incised, and Press-molded. We examine differences in their paste technology and use of geomaterials, while situating our findings within regional politico-economic trends. Doing so yields insights into changing ceramic production practices at Cerro San Isidro. Finally, we briefly compare our findings with previous compositional analyses conducted by the first author. This allows us to understand how ceramics at Cerro San Isidro relate to those recovered from other Ancash sites, expanding scholarly understandings of ancient Andean production and exchange networks.

Grávalos, M. Elizabeth [81] see Bria, Rebecca

Gravel-Miguel, Claudine (New Mexico Consortium), Grant Snitker (New Mexico Consortium), Jayde Hirniak (Arizona State University) and Katherine Peck (University of New Mexico)**[308]***Combining Aerial Lidar and Deep Learning to Detect Archaeological Features in the Piedmont National Wildlife Refuge, Georgia*

A growing number of archaeologists are using lidar-derived high-resolution digital terrain models (DTM) to detect and document archaeological features. Early adopters used visualizations to manually detect archaeological features; however, recent technological advances provide new tools that can considerably increase the efficiency and effectiveness of archaeological feature detection in DTMs. Our team uses deep learning convolutional neural network (CNN) models—a subset of the larger machine-learning (ML) toolset—to quickly detect archaeological features over large areas. CNNs specialize in the analysis of visual imagery, making them particularly useful for the detection of visual features. For this project, we trained U-Net models with VGG and ResNet backbones to detect the presence and location of archaeological cotton terraces in the Piedmont National Wildlife Refuge, Georgia. While not all models produced compelling results, the best ones reached recall (also known as the True Positive Rate) values >85% and detected terraces that had been missed during manual annotation, thus illustrating the robustness of this method. In

this presentation, we demonstrate the steps required to train our models, best practices for a successful use of this methodology, and the resulting maps and outputs it can create.

Gravel-Miguel, Claudine [246] see Riel-Salvatore, Julien

Graves, William [172] see Van Keuren, Scott

Gray, D. Ryan (University of New Orleans) and Emily Gallo (University of New Orleans)
[105]

The Social Life of Crash Sites: Understanding World War II Sites in Context in the Search for Missing Air Crew
Archaeological sites are only rarely preserved as pristine moments in time, unaltered since the site was formed. More often, they are a continuous production, forming a part of the social and cultural landscape of the surrounding area. In this paper, we draw on Appadurai's idea of the "the social life of things" to explore the social life of World War II aircraft crash sites, through case studies drawn from our work at sites in Central Europe. Such sites, themselves disruptions into local terrains that may have archaeological significance, often preserve a record of visitation, development, and alteration reaching to the present day. One of the challenges in fulfilling the DPAA's mission of providing the fullest possible accounting of America's missing military personnel is disentangling the many ways that the postdeposition life of the sites has affected the potential for recovery.

Gray, D. Ryan (University of New Orleans)

[131]

Discussant

[131]

Chair

Gray, D. Ryan [1] see Rees, Mark

Gray, Kerryn [236] see Sealy, Judith

Greaves, Aspen (University of Pittsburgh), Jargalan Burentogtokh (National University of Mongolia), Jang-Sik Park (Hongik University) and William Gardner (Yale University)

[23]

Metallurgical Traditions of a Mongolian Habitation Site

Two models are employed to explain iron objects in assemblages from nomadic peoples of Mongolia. One argument posits that pastoralists imported Chinese iron objects, and when they practiced metallurgy, used methods learned from Chinese craftsmen. Another model, notably argued for by Jang-Sik Park, suggests that nomads practiced small-scale metallurgy to produce unique iron objects relevant for nomadic lifestyles. In this argument, Park emphasizes the difference between the Chinese-style tradition based on large-scale production of cast iron and an alternative based on small-scale production of bloomery iron, which was used in the production of objects excavated from domestic contexts in north-central Mongolia from 400 BC to AD 1300. This presentation supports the unique metallurgy tradition argument by offering further evidence of a metallurgy production features at Tsagaan Ereg, a domestic site in the forest-steppe region of Mongolia. Tsagaan Ereg contains multiple occupation events, including a Mongol-era (AD 1309–1412) multiyear seasonally occupied pit house. Forthcoming radiocarbon dates will place the furnace feature within the timeline of occupation of Tarvagatai Valley. Previous findings from metallurgical research in Mongolia have suggested that iron traditions were flexible and multiscalar; this presentation supports this conclusion by furthering the study of microscale iron acquisition and production.

Greaves, Russell (Office of Contract Archeology, University of New Mexico [UNM]), Alondra Neunsinger (Office of Contract Archeology, UNM), Richard Maestas (Office of Contract Archeology, UNM), Alexander Kurota (Office of Contract Archeology, UNM) and Dakota Pavell (Office of Contract Archeology, UNM)

[41]

Perishable Artifacts from Rockshelters and Caves in the Guadalupe Mountains of New Mexico and Texas: Dating and Stylistic Study of Sandals, Baskets, Matting, and Cordage from Early Twentieth-Century Excavations

The Office of Contract Archeology at the University of New Mexico is performing investigations of organic artifacts from two caves and seven rockshelters in the Guadalupe Mountains of southeastern New Mexico and west Texas. These caves (Burnet Cave, LA 101435, and Hermit's Cave, LA 4992) and rockshelters were excavated in the early twentieth century, and minimal stratigraphic information was recorded for these stratified deposits. Additionally, no chronometric dating has previously been performed on sites that include potential Paleoindian and Early Archaic occupations as the earliest uses of these shelters. OCA reports AMS dates for samples of organic artifacts from these locations curated at multiple museums and facilities that include sandals, baskets, matting, cordage, quids, raw material bundles, and several kinds of wooden artifacts. OCA has also recorded updated descriptive data on these items that include raw materials, production techniques, and conservative functional inferences. These data are presented to help provide chronological data about these shelters, to update information about this regional sample of organic artifacts, and to address stylistic variation in weaving methods for the large sample of sandals and basketry fragments.

Green, Adam (University of York)

[56]

Who Makes the Rules in Egalitarian Cities? A View from Bronze Age South Asia

By 2600 BC, the first cities had emerged in South Asia. Expansive and dynamic, the Indus civilization prompted the growth of massive settlements like Mohenjo-daro in Pakistan and Rakhigarhi in India. Both cities were part of a prosperous agropastoral economy that supported the invention of writing, long-distance exchange, large nonresidential buildings, planned neighborhoods, and a host of sophisticated craft technologies. And yet, like many of the world's first large-scale societies, the Indus civilization was conspicuously egalitarian, its people eschewing palaces, ostentatious tombs, asymmetrical wealth distributions, and individual-aggrandizing art. Where did the "rules" of Indus egalitarianism come from? This paper addresses this question, drawing from work of the economist Thomas Piketty. In this chapter, I grapple with the tensions between ideology and economic growth. If the rules of urban egalitarianism were simply upscaled from the pre-urban settlements, why were they so long lived, and how did they adapt to the growth in the urban phase? If, on the other hand, we detect glimpses of inequality in pre-urban settlements, then Indus egalitarianism was established within the Urban communities. This would suggest that Indus cities "invented" egalitarianism and prompt consideration of how its ideologies and technologies may have discouraged nontrivial disparities.

Green, Adam [150] see Smith, J. Gregory

Green, Debra (University of Oklahoma, Archeological Survey)

[313]

Discussant

Green, Jennifer (Florida Museum of Natural History)

[280]

Discussant

Green, Jennifer (Florida Museum of Natural History), Nicole Fuller (Florida Museum of Natural History), Michelle LeFebvre (Florida Museum of Natural History) and Neill Wallis (Florida Museum of Natural History)

[318]

Archaeology of the Eastern Oyster: Collection and Curation Practices by North American Practitioners

Oysters have long served as both ecological and cultural keystone species. Across many coastal regions of the world, oyster-dominated shell middens and mounds are common features of the archaeological record. Oyster deposits serve as time capsules containing evidence of past environmental conditions, harvest patterns, and subsistence economies. Due to the substantial volume of oyster specimens recovered from coastal sites, archaeologists must often navigate challenges regarding the curation or disposal of assemblages. A primary challenge includes balancing finite space for long-term curation with the potential for future research of unanalyzed bulk shell collections. Here we present the results of a 2023 survey focused on assessing archaeological practices related to the recovery and curation of eastern oyster specimens in North America. The results identify practices across institutions housing archaeological oysters including museums, universities, government and Tribal repositories, and private CRM firms. We summarize trends in field research design, laboratory analyses, and approaches to curation. The broader impacts of this survey highlight commonalities and differences in curation practices as a foundation for discussing best practices in oyster curation and collections management, as well as how to improve inter-institution research across collections with implications for long-term curation care and applications to other shell taxa.

Greene, Richard [221] see Poister, Nicholas

Greene, Taylor (Arkansas Archeological Survey)

[277]

Creating a Frontier Community: Ceremony and Political Elites in a Middle Appalachian Mississippian Village

Carter Robinson (44LE10) is a Mississippian mound site in use from the mid-fourteenth century to the mid-fifteenth century in the Appalachian Mountains of modern-day Southwest Virginia. This paper examines the roles of potential political elites within the community, first examining the artifact assemblage associated with the only excavated multi-phase structure at the site, and then comparing recent radiocarbon dating from this structure to previously conducted radiocarbon dating at the site. These data are used to suggest the relationship the inhabitants of the multi-phase structure might have held with the wider community they lived in.

Greene, Tayna [6] see Ek, Jerald

Greenfield, Tina [169] see Richardson, Sarah

Greenland, Jamie (University of Utah, Natural History Museum of Utah) and Shannon Boomgarden (University of Utah, Natural History Museum of Utah)

[41]

Ongoing Excavations at Big Village (42EM2861) in Range Creek Canyon, Utah

Excavations were conducted from 2007 to 2013 by the University of Utah at Big Village (42EM2861) in Range Creek Canyon, Utah, to explore questions related to Fremont residential site structure and adaptations, primarily by exploring the relationships between surface features and subsurface features and artifact assemblages. Additional excavations performed from 2021 to 2022 focused on two previously identified overlapping structures. Methods included total station and GIS mapping, triangulation mapping, 3D modeling, artifact recovery and analysis, radiocarbon dating, and starch analysis. A total of 5,478 artifacts were collected during the 2021–2022 excavations. Radiocarbon dating returned median dates inconsistent with stratigraphic

layering, confounding efforts to establish a precise chronology; however, the structures may be relatively contemporaneous as the 95% confidence intervals of the dates overlap. Further exposure of the features may contribute to a more robust understanding of site features and relationships. Prior studies of Fremont villages in the region indicate that surface rock alignment features are associated with pithouses, but this is confirmed neither by the limited previous studies performed in Range Creek Canyon nor by the current study, the results of which can contribute to understanding of Fremont adaptations and site structure within the broader context of Southwest prehistory.

Greenlee, Diana (University of Louisiana, Monroe)

[24]

Chair

Greenlee, Diana (University of Louisiana, Monroe), Rinita Dalan (Minnesota State University, Moorhead [Emeritus]), Michael Hargrave (ERDC CERL [Retired]), R. Berle Clay (Cultural Resource Analysts Inc. [Retired]) and Arne Anderson Stamnes (NTNU University Museum, Trondheim, Norway)

[24]

Poverty Point's Plaza as Monumental Earthwork

Research at Cahokia, Raffman, and other sites has shown the folly of assuming that plazas are unaltered because they are level and dwarfed by the topography of surrounding earthworks. Their unassuming topography can conceal evidence of significant anthropogenic alterations, past activities, and buried features. Although Ford and Webb's classic monograph on Poverty Point made no mention of the large, flat area enclosed within their newly recognized C-shaped earthen ridges, other than to indicate that it contained a scarcity of artifacts, it is not a recent notion that earthmoving activities took place there. Multiple studies have documented an original undulating surface that was filled in places with occupational debris and loaded fills. Is today's relatively flat plaza, however, as pedantic as filling in potholes to create a level surface? Or do we need to look at the Poverty Point plaza in a new and holistic way—as a monumental earthwork with a complex construction history? We argue for the latter, bringing together what is known about the anthropogenic creation of the Poverty Point plaza from our work (since 2006) as well as other studies.

Greenlee, Diana [24] see Alvey, Jeffrey

Greenlee, Diana [283] see Hargrave, Michael

Greenlee, Diana [24] see Sherman, Simon

Greenlee, Diana [177] see Whitehurst, Sadie

Greenwald, Alexandra [20] see Baka, Abby

Greer, John [244] see Greer, Mavis

Greer, Matthew (University of Missouri Research Reactor)

[209]

Black Studies and the Ontological Politics of Knowledge Production in African Diaspora Archaeology

Archaeologists often draw on theories from other disciplines to frame their research, which invariably draws our work into the orbit of larger political debates within and outside the academy. Even a subtle gravitational pull from these political bodies of theory can have substantial effects on how archaeologists conceive of past realities, especially since many social theories continue to perpetuate racist, colonial, capitalist, and sexist worldviews they were originally developed to justify. To demonstrate the effect this can have on archaeological knowledge production, my paper uses the work of Black studies theorist Sylvia Wynter to explore how archaeological studies that draw from neo-evolutionary and behavioral ecological theories

define what it means to be human in ways that pulls their work into the orbit of, and unintentionally reproduces, discourses intended to racialize and dehumanize Black women and men. While these theories are problematic in archaeology writ large, their use in African diaspora archaeology can be especially damaging for the people whose lives we study and whose descendants we collaborate with.

Greer, Mavis (Greer Archeology) and John Greer (Greer Archeology)
[244]

Weeksville Pictographs, Western Montana: The Importance of Location

Setting and geographic context have always been integral to rock art analysis and are important in combination with symbolic content for determining site function. The Weeksville Pictographs in western Montana exemplify intentional selection of a location for pre- and postcontact rock art by both Natives and immigrants. The precontact pictographs are dominated by red paintings in the Columbia Plateau style, and early Euro-American painted additions serve as roadside signs to advertise a store at the nearby town of Plains. This specific rock face has continuously served as a public billboard for travelers along a route through the western mountains, first as a historic Indian trail and subsequently as an early regional roadway. The site is important in the evaluation of what we categorize as graffiti and what might be erroneously removed in the guise of preservation.

Gregoricka, Lesley (University of South Alabama) and Jaime Ullinger (Quinnipiac University)
[68]

Representation and Distribution of Fragmented Elements from Human Skeletons in Umm an-Nar Tombs: Impact of Secondary Mortuary Practices

Umm an-Nar (2700–2000 BCE) skeletons in the United Arab Emirates remain challenging to investigate due to secondary mortuary practices resulting in commingling, fragmentation, and cremation. Tombs contain multiple chambers, but little work has been done to examine whether certain skeletal elements may have been intentionally moved into particular chambers as part of funerary traditions. To assess skeletal representation, the minimum number of individuals (MNI) for Umm an-Nar tomb Unar 2 (2300–2100 BCE) was calculated for a variety of cranial and postcranial elements. To explore the potential for redistribution, the location of nearly 12,000 fragments was evaluated across 12 chambers. MNI estimates suggest that at least 411 individuals are represented, although estimates from the skull (MNI range: 328–411) varied dramatically from postcranial elements (MNI range: 183–234), suggesting that the skull was more likely to be returned to the tomb following secondary mortuary treatments, or that portions of the skull were more likely to survive. Additionally, while some chambers were generally favored over others for disposal of the dead, no significant differences ($\chi^2=47.6$, $df = 39$, $p = 0.16$) existed in the distribution of some skeletal elements over others across chambers, indicating a lack of preference for secondary placement of particular bones back into the tomb.

Gregory, Andrea [88] see Burger, Rachel

Greiner, Elliot [41] see Michalski, Matthew

Grenda, Donn [272] see Ciolek-Torello, Richard

Gresky, Julia (German Archaeological Institute) and Lee Clare (German Archaeological Institute)
[25]

Human Body Parts from the Monumental Special Buildings at Pre-Pottery Neolithic (PPN) Göbekli Tepe, Southeast Türkiye

In recent years, the Pre-Pottery Neolithic (ca. 9500–8000 BC) site of Göbekli Tepe in Turkey has seen the emergence of some major hypotheses based on results from ongoing fieldwork. Perhaps the most significant new insight relates to site formation, especially the filling processes of the large monumental special buildings with their collections of characteristic limestone T-shaped monoliths. Until a few years ago, it was considered that human remains recovered during the excavation of some of these buildings were part of a massive intentional backfill of the structures at the close of their use-lives. In the case of the animal bones found in this fill matrix, this interpretation led to ideas of the building-burial taking place against the backdrop of a religious ceremony accompanied by feasting. For the less numerous human bones, this scenario implied the intentional deposition of selected human body parts. Naturally, this is a very interesting possibility given the topic of this symposium. However, new interpretations of the archaeology and site formation processes have challenged this hypothesis. Here, we will present our current conclusions regarding the archaeology at Göbekli Tepe and focus on their impact on the interpretation of human body parts recovered from the special buildings.

Grey, Emily (University of Western Australia)

[288]

Finding Grasses in the Rock Art of Balanggarra Country, Kimberley, Northwest Australia

The floristic complexity of native Australian grasslands means they are a haven for biodiversity, and have provided a range of subsistence, material, and sociocultural resources for Indigenous peoples. Disentangling the ways in which people engaged with these environments is a complex task, and has, to date, relied on the limited examples of grass materials in archaeobotanical assemblages, and residue studies of grinding patches. This paper examines a unique and relatively unstudied form of past human-grass engagement, expressed in the rock art of Balanggarra Country, northwest Australia, where native grasses were coated with pigment and printed onto rockshelter surfaces. These motifs, termed grass prints, are associated with the oldest dated rock art in the Kimberley and embody a history of complex environmental engagements. Drawing on iconographic analysis and experimental archaeology, this paper argues that grass prints were created through repeated impacts using culturally significant grass species, including *Themeda triandra* and *Oryza rufipogon*, leaving behind highly detailed and morphologically attributable prints. Grass prints reveal micro-morphological details that demonstrate a repeated emphasis on the seeding inflorescences of grasses, suggesting native grasses may have played a more significant role in forager-environment relationships during the post-LGM period in the Kimberley than previously thought.

Grier, Colin [36] see Smith, Erin

Griffin, Delancey (Columbia University), Emily Pihlaja (Columbia University) and Jared Barlament (Columbia University)

[285]

The Ralph Solecki Collection: Revisiting Forgotten Materials in an Urban New York Landscape

Ralph Solecki, made famous for his work arguing for the “humanity” of the Neanderthals of Shanidar Cave, contributed invaluable in his early career to Northeast American archaeology by excavating sites in the New York metropolitan area which would soon become inaccessible due to urban expansion. First collected in the 1930s, the materials in the collection span from the Transitional/Late Archaic to the early 1800s, including Indigenous pottery and lithics as well as European manufactured products. This poster addresses research of a collection that is being visited for the first time in 19 years. Using different ceramic analysis techniques, our research will focus on determining regional extents of communities of practice in terms of ceramic design and looking at how cultural transmission can highlight the mobility of indigenous people in the Northeast during the Woodland period. Analyzing this collection, which represents materials largely either buried under urban architecture or hidden away in museum collections, will open opportunities for fresh perspectives about this period of time in Northeast history.

Griffin, Gabriel [326] see Lowry, Sarah

Griffin, Rob [173] see Herndon, Kelsey

Grigg, Nicole (University of Chicago)
[277]

The Archaeology of Citizenship in the Nation's Capital: Reconsidering DC's Legacy Collections

As the United States redeveloped restrictions on birthright and naturalized citizenship over the late nineteenth century, Washington, DC, served as a testing ground even though none of its residents held full citizenship because they lived in the city. Depending on the issue at stake, definitions of good citizenship increasingly integrated private consumption—from cleanliness to childrearing—with public consumption like trash in front yards or visits to beer gardens. Archaeologists readily direct analysis to the primary objects of these discourses, from teaware to alcohol. Our approaches less frequently consider the political and moral implications attached to the range of daily consumption that occurred alongside trends in important objects. This paper revisits archaeological collections from across the District to compare the domestic consumption of working class District-born, migrant, and immigrant Washingtonians. Attending to how goods were used allows us to understand citizenship not only through a set of objects indexing political participation but as material practices that can change the terms of that participation. How did Washingtonians fashion alternative forms of power and belonging after the end of Reconstruction?

Grignon, David [130] see McLeester, Madeleine

Grillo, Katherine (University of Florida), Mary Prendergast (Rice University), Natalie Mueller (Washington University, St. Louis), Agness Gidna (Ngorongoro Conservation Area Authority) and Giuseppina Mutri (University of Connecticut)
[151]

Reassessing Plants and Pastoralist Foodways in Ancient Eastern Africa: A Preliminary Report on New Excavations at Luxmanda, Tanzania

Scholars increasingly emphasize that pastoralist foodways centered on livestock systems—being variable and flexible—are especially responsive to climate stress and other drivers of food insecurity. We ask something ostensibly simple but as yet poorly understood in eastern Africa: How, and why, have pastoralist foodways changed over time? Pastoralist economies have been examined primarily through animal bones found at archaeological sites; new isotopic and molecular methods have shed light on patterns of dairy consumption. We hypothesize that wild and/or indigenous crop plants would have been deeply embedded in pastoralist cuisines throughout the Pastoral Neolithic (ca. 5000–1200 BP) as well. Excavations at the 3,000-year-old pastoralist site of Luxmanda, Tanzania, have yielded preliminary evidence suggesting plant processing on grinding stones. We challenge analogical frames of reference, which have long foregrounded the (modern?) triad of milk, meat, and blood, used to understand early pastoralist cuisines in eastern Africa. Ethnobotanical work with pastoralist and agropastoralist communities in this region will aid in contextualizing archaeological findings and provide critically needed reference material as well. Finally, we introduce the discovery of a new site near Lake Basotu in north-central Tanzania that may finally allow for regional archaeological comparison.

Grimes, Vaughan [247] see Barakat, Sarah

Griswold, William (NPS), Joel Dukes (NPS) and Margaret (Meg) Wilkes (NPS)
[177]

Investigations in the Barber Wheatfields, Saratoga National Historical Park 2019, 2021

Battlefield archaeology was conducted in the Barber Wheatfields at Saratoga National Historical Park for two seasons in 2019 and 2021. This battlefield was the catalyst for the second battle of Saratoga, colloquially known as the Battle for Bemis Heights, and ultimately led to an American victory over the British Army. The victory at Saratoga was a turning point in the American Revolution and compelled France to side with the Americans in the conflict. While metal detection was used to document the ebb and flow of the battle and the concentration of artillery and musket fire, geophysical surveys were used to guide target selection for archaeological investigation for key structures on the battlefield. Drone-based lidar was used to collect site micro-topography and multispectral data. These high-resolution data were the base for integration of all the project spatial data in GIS, enabling spatial query and modeling of data to inform interpretation of the tactical landscape and engagement of this battle. This poster presents the results for these two seasons of investigation.

Griswold, William [177] see Wilkes, Margaret (Meg)

Groat, Elizabeth (Utah State University)

[282]

Whales, Chiefs, and Seal Stomachs: Understanding Ceramic Adoption in the Kodiak Archipelago

This study uses technological investment thinking and experimental archaeology to examine decision of the socially complex hunter-gatherers of the Kodiak Archipelago to adopt ceramics, ca. 500 cal BP. This decision is puzzling for two reasons: (1) ceramic adoption on Kodiak lags centuries behind its adoption on the adjacent mainland, and (2) evidence of pottery is largely limited to the southern half of the archipelago. Ceramic adoption on Kodiak occurs at a time of unprecedented population levels, resource intensification, and social complexity. Additionally, pottery tends to be found where marine mammals are most abundant. These two factors have suggested the hypothesis that ceramics were adopted to facilitate the mass-production of surpluses of marine mammal oil, a dietary staple, potentially for trade. Using experimentally derived values for return rates and manufacturing times of competing oil-rendering technologies, I evaluate the plausibility of this hypothesis: does it make sense to choose to make a pot if, and only if, one wants to render a surplus quantity of oil?

Grogan, David (University of Notre Dame)

[170]

Insights into Early Medieval Irish Glass: Preliminary Findings, Promises, and Limitations of an Archaeometric Analysis

Glass is a common find on early medieval Irish sites, having been found in association with native Irish settlement-enclosures, monastic centers, and Viking towns. Evidence for secondary production (the recycling and reworking of existing glass to form new objects) has been identified for each of these site types. No evidence for primary production (making glass from raw materials) has been found. As a result, all early medieval Irish glass represents imported material, which could have then been reworked at secondary production centers. Prior research has established chronologies for European glass compositional groups from late antiquity through the early medieval period. While there has been some work on the early medieval Irish glass assemblage (e.g., identifying imported vessels, visual classification of beads, and limited chemical analysis), a more thorough understanding of the chemical compositional groups represented in the Irish assemblage embedded within the broader archaeological context of settlement, craft production, and exchange practices holds the potential to improve our understanding of the early medieval Irish socioeconomic structure. In this paper, I provide preliminary insights from a pXRF analysis of a selection of glass from eight early medieval Irish sites and discuss the promises and limitations of a wider archaeometric study.

Groman-Yaroslavski, Iris [116] see Bar-Yosef Mayer, Daniella

Grooms, Michael**[120]***Geoarchaeology at the Little John Site (KdVo-6), Yukon Territory, Canada*

The Little John Site (KdVo-6), Yukon Territory, Canada, contains the presence of both Chindadn/Nenana and Denali artifacts in unique stratified contexts. The site contains loess/paleosol stratigraphic sequences spanning the past 14,000 years. Sediment and soil, XRD, INAA/ICP-MS, and thin section analysis have illuminated the chronology, environment, and depositional history of the site's unique geologic context and archaeological materials.

Grooms, Seth (Appalachian State University)**[24]***A New History of the Jaketown Site*

Recent findings from Poverty Point and contemporary sites are changing our understanding of the Late Archaic Southeast. Here, I summarize recent research at the Jaketown site in Mississippi and discuss how our findings fit within the broader context of the Poverty Point phenomenon. Chronostratigraphic data, interpreted using insights from American Indian scholars, support a new history of Jaketown. Our findings suggest that Jaketown underwent a dramatic transformation at ca. 3400 cal BP that included rapid earthwork construction and related rituals that are best understood as communal ritual performances meant to navigate a complex web of relations.

Grooms, Seth [24] see Kidder, Tristram

Grosman, Leore [199] see Lebenzon, Roxanne

Grossman, Aryeh [55] see Waweru, Veronica

Grossman, Kathryn (North Carolina State University) and Tate Paulette (North Carolina State University)**[215]***Rethinking Caprines-As-Capital: Pastoralism and the Low-Power States of Early Mesopotamia*

In ancient Mesopotamia, animal husbandry was intimately bound up with the process of state making. The twin institutional powers of palace and temple managed enormous herds of sheep and goats. But were these animals mere wealth-on-the-hoof, staple goods supporting a classic system of staple finance? Or were they something else, operating simultaneously across multiple registers, not just economic resources but complicated forms of social, political, economic, and religious capital? In this paper, we argue for the latter. Drawing on a theoretical framework that blends social zooarchaeology with a low-power model for the states of early Mesopotamia, we seek to complicate both the politics of state making in the region and the existing literature on human-animal-divine interactions. In a world of aspirational states and incomplete authority, sheep and goats served as a tool of strategic ambiguation, a means of projecting an image of broad-based sovereignty that did not yet exist in practice.

Gruenthal-Rankin, Ariel [80] see Slusarska, Katarzyna

Grunfeld, Magill [261] see Bey, George III

Guardado-Estrada, Mariano [106] see Pelaez-Ballestas, Ingris

Guderjan, Thomas (University of Texas, Tyler), Alexander Parmington (Extent Heritage-Australia) and Colleen Hanratty (University of Texas, Tyler)

[32]

Dating Classic Maya Houselot Markers in Northwestern Belize

Surrounding the ancient Maya site of Xnoha in northwestern Belize are residential areas with houselots delineated by Linear Stone Boundary Markers (LSBMs). Lidar from 2016 revealed hundreds of such houselots. However, until now, we had no understanding of the dates of construction of the LSBMs. In 2023, backhoe testing was undertaken to determine that construction dates of the LSBMs were Early Classic at approximately 20 locations. If dates from other locations remain consistent with this sample, we must consider the implications of the rapid rise of Xnoha and the equally rapid rise of the idea of defining private space and the very idea of privately controlled exterior space.

Guderjan, Thomas [251] see Haines, Helen

Guderjan, Thomas [213] see Hanratty, Colleen

Guebard, Matthew (National Park Service) and Larry Benallie (Gila River Indian Community Tribal Historic Preservation Office)

[88]

Co-stewardship, Preservation, and Archaeology in Southern Arizona's National Park Units

The National Park Service (NPS) is increasingly focused on strengthening relationships with tribal governments through policies designed to promote the co-stewardship of natural and cultural resources located on Native American ancestral homelands. Recent Secretarial Orders and Policy Memorandums provide leadership and direction from the top, but parks are ultimately responsible for effecting positive changes on their own and in collaboration with tribal governments and communities. This is no simple task, especially in park units where past archaeological research, interpretation, and management have strained relationships with local descendant communities. This presentation will discuss the recent successes and challenges associated with the co-stewardship of ancestral places in southern and central Arizona.

Guebard, Matthew (National Park Service)

[144]

Discussant

Guengerich, Anna (Eckerd College) and James Crandall (California State University, Sacramento)

[81]

Current Research on Early Social Change in the Utcubamba Basin

In contrast to a long history of study of the Late Intermediate period societies of the Utcubamba Basin, research focusing on pre-Middle Horizon social change has only begun within the last 10 years. In this paper we examine existing literature from early archaeological contexts and introduce findings from our own recent research that hints at broad social changes that occurred throughout the Utcubamba Basin. We review recent literature that indicates maize was introduced as early as 1340 BCE, but intensive agriculture and land clearing practices may have been regionally variable; we briefly address the presence of petroglyphs and other forms of representation present in the area similar to those found throughout the northern central highlands; we present our evidence for intraregional variation in ceramic styles; and finally present our evidence that mountaintop centers were important spaces for incipient communities and places of social interaction before the development of indigenous Chachapoya communities with stone architectural traditions after 950 CE.

Guengerich, Anna (Eckerd College)

[208]

Moderator

Guerini, Giulietta (Scuola Normale Superiore, Pisa)**[109]***Mirrors in the Adriatic Region: Holders, Contexts, Exchanges*

The ancient Adriatic Sea (seventh–second century BC) was a place where consistent encounters and trades happened between the many peoples and cultures who lived on its shores (Etruscan, Picenes, Daunians, Greeks, Illirian . . .). This paper focuses on the use of mirrors in this area by analyzing the contexts where they were been found (mainly, but not exclusively, tombs) in order to understand who their holders were and how these objects could also be moved between quite distant places whether for trade or following the owners. In fact, there are port cities, such as Spina, on the delta of the river Po in Northern Italy, where people with different origins coexisted (mainly Etruscans and Greeks but also Celts, Umbrians . . .) and so also mirrors belonging to different productions have been unearthed. What were the similarities and differences in the use made of mirrors in every cultural district overlooking the Adriatic? Were these objects perceived as distinctive of their own tradition and carried with them by the owners or instead were they luxury objects traded together with other similar ones? A complete survey of the Adriatic documentation allows to advance knowledge on these issues.

Guernsey, Julia (University of Texas, Austin)**[128]***Chair***Guernsey, Julia (University of Texas, Austin) and Kathryn Reese-Taylor (University of Calgary)****[128]***Tuber Cultivation and Tropes of Fragmentation in Mesoamerica*

Acts of deliberate fragmentation characterize tuber cultivation. Root plants rarely produce seeds, so new tubers develop by fragmenting the stem and inserting the severed portion into the ground, from which new tubers develop. Evidence of deliberate fragmentation likewise characterizes stone sculptures, ceramic figurines, and other objects produced during the Preclassic period. The trope of fragmentation also appears in broadly shared myths in which dismemberment, or partibility, was crucial to the creation of the world: breaking, and burying or returning fragments to the earth, was a prerequisite to making. We argue that acts of deliberate fragmentation, both for objects and tubers such as manioc, were viewed as germinative and crucial to the social and economic well-being of communities and that the trope of fragmentation provided a framework for practices both ceremonial and agricultural.

Guernsey, Julia [309] see Barrientos, Tomas

Guernsey, Julia [155] see Love, Michael

Guest, Peter [334] see Mion, Leïa

Guevara-Duque, Maria Isabel (University of Illinois, Chicago; Field Museum Field Museum of Natural History), Laure Dussubieux (Field Museum of Natural History) and Gary Feinman (Field Museum of Natural History)**[50]***From Jalisco, Mexico, to Quimistán, Honduras: Analyzing Mesoamerican Metals from the Field Museum*

Copper artifacts were prominent in Mesoamerica during the last precolonial millennium, more widely distributed than silver and gold. Mesoamerican copper was formed into axes, axe-monies, rings, pendants, bells, and needles, among other artifacts. The most used alloy in this region was copper-arsenic, and there are two metallurgical traditions identified. The first, found in north and west Mexico, connected to North American cold hammering and annealing, and the other in central Mexico and southeastern Mesoamerica, which incorporated South American cold hammering, annealing casting, and lost wax methods. This paper is an overview of an ongoing characterization project via portable-XRF and laser ablation–inductively coupled

plasma–mass spectrometry involving copper artifacts held at the Field Museum of Natural History in Chicago. The results show that close to half of the artifacts are pure copper, and the rest are copper-based alloys, with Cu-Sn and Cu-As being the most prominent. Gold and silver were also found in one artifact each. The alloy mixtures seem to be related to the provenience and the type of artifact analyzed. This information and conclusions will contribute to the ongoing discussion on the use and distribution of copper-based artifacts in Mesoamerica and the rest of the continent.

Guilfoyle, David [254] see Redman, Kimberly

Guiry, Eric [200] see Bernard, Hayden

Guiry, Eric [131] see Kennedy, Ryan

Gum, Victoria (College of William and Mary)
[312]

Landscapes of Silence at the First Baptist Church

Recent excavations at the First Baptist Church on Nassau Street in Williamsburg, Virginia, have illuminated significant information about the site, most notably the presence of over 60 burials. However, the First Baptist site also provides an opportunity to literally excavate the history of our own discipline. Following the concept of an “anthropology of White supremacy” (Beliso-de Jesus & Pierre 2020), I examine the history of archaeological research at the First Baptist site from 1956 to present and its contrasting deployments: first to erase the First Baptist community from the museum landscape and, 70 years later, to uncover and memorialize that same history. I discuss the creation of physical and symbolic landscapes within the museum and the ways in which Black history was displaced during the creation of Colonial Williamsburg. I then examine the ongoing, community-driven archaeological project which is resituating the site within the visible historical landscape. In the past five years, the project has garnered national and international attention as an example of ethical, community-engaged research. However, I suggest that while this project is a good start, there is still much work to be done in the pursuit of a truly ethical, reconciliatory archaeology.

Gung, Stepanus [288] see Dilkes-Hall, India Ella

Gunn, Joel (University of North Carolina, Greensboro)
[191]

Circum-Atlantic Responses to the Late Antique Little Ice Age (536–660 CE)

Studies of North Atlantic cultures around the margins of the Bermuda Azores Subtropical High offer opportunities to observe parallel impacts on cultures on both sides of an ocean on four continents (Americas, Eurasia, Africa) as changes in global average temperatures influence the size and position of the High. Of special interest is the influence of the Late Antique Little Ice Age, the globally coldest climate episode in the last 2,500 years. Its inception marked the change in general terms from a warming world with high sea levels and heavy precipitation toward an ice age of declining sea level and cool savannahs. We assume that change in global environment emerges into the realm of a Historical World Crisis when it appears on both sides of the Atlantic at the same time. In the first millennium CE this is a meaningful quantification because similar hegemonic social structures dominated both hemispheres. The lynch pin of the sixth-century world crisis is the fact that the Rome and Teotihuacan experienced sudden, severe changes at virtually the same moment in history with any differences in precise timing explainable in terms of other variables in their multivariable, cascading systems failures.

Gunsenheimer, Antje (University of Bonn)**[59]***Reconsidering the Penal System in Aztec Society: A New Perspective on Human Sacrifice and Enslavement*

The contribution deals with the question of how crimes were punished in the Aztec penal system. We know that Aztec society—as many other premodern societies—did not have prisons for long-term punishment of crimes, nor for any forms of preventive detention. Based on primary sources, it will be discussed in how far Aztec society used forms of temporarily limited enslavement to organize atonement and reparation. Furthermore, it will be debated to what extent the social affiliation to a calpulli had an impact on those forms of punishment and their control. In this context, forms of capital punishment are examined and questioned if supposedly human sacrifices in Aztec society were part of the penal system.

Guo, Siyun, Yu Dong (Shandong University) and Alice Yao (University of Chicago)**[315]***Herding in Shifting Politics: A Preliminary Isotopic Study on Dian Lake Faunal Remains, Southwestern China*

This paper combines isotope analysis from collagen and hydroxyapatite patterns from the Bronze Age to imperial periods in the humid subtropical highlands of southwestern China. We sampled and analyzed 28 faunal bones and four teeth from two occupation sites in the Lake Dian basin that are associated with the Dian polity (ca. 700–100 BC) and span into the Ming-Qing period (ca. AD 1600–1900). The combined results from carbon, nitrogen, and oxygen isotope identify a pastoralist animal regime markedly distinct from the herding practices more typical of the semiarid temperate grassland and offer a contrasting view of specialized herd management oriented around the symbolic and political significance of certain livestock species in the constitution of highland society. Pairing this isotopic research with Dian animal art and iconography, we expand on the social significance of certain species based on the varying kinds of animal rearing and “veterinary” care accorded to different animals.

Gupta, Neha (University of British Columbia)**[63]***Discussant***Gusick, Amy (Natural History Museum of Los Angeles), Nakia Zavalla (Santa Ynez Band of Chumash Indians), Wendy Teeter (Santa Ynez Band of Chumash Indians) and Amber Lincoln (Natural History Museum Los Angeles)****[8]***Navigating State and Federal NAGPRA Regulations in California*

In California, there are approximately 109 federally recognized tribes and at least 55 tribes not recognized by the federal government—the most of any state in the United States. Most, if not all, of these tribes have been displaced by the colonial occupation that ushered in the California Mission system and the centuries of disregard for traditional territories, treaties, and tribal sovereignty. Enactment of NAGPRA in the 1990s provided some form of recourse for Native American tribes to reclaim and repatriate their ancestors and cultural material. However, recognizing gaps in this law, in the early 2000s California enacted a state level NAGPRA law (CaINAGPRA) that provides a pathway to repatriation claims for state recognized California Native American tribes. While both federal and non-federal tribes in California have been working together on repatriations for decades, CaINAGPRA has solidified this process. While the dual federal/state process can be challenging, NAGPRA/CaINAGPRA practitioners are working together to develop best practices for concurrent NAGPRA/CaINAGPRA processes. The newly formed California Community of Practice is one such organization that provides space for practitioners to discuss best practices and acts as a training ground for those working toward efficient and respectful consultation and repatriation in California.

Guskey, Tanner (New Mexico State University) and Kelly Jenks (New Mexico State University)
[206]

The Use-Life of Spanish Colonial Metal Artifacts from Carnué, New Mexico

The acquisition of metal tools on the Spanish colonial frontier of New Mexico was a rare occurrence, but it is an activity we may be able to better understand through analysis of their production, modification, and utilization as well as sourcing their elemental makeup through XRF. Metals of various types were utilized by settlers for agriculture, cooking, medical treatment, mining, religious practices, tailoring, trade, woodworking, and similar activities. Using XRF to identify either their mining or production source would enable us to more accurately depict the trade networks of colonial New Spain. The late Spanish colonial site of San Miguel de Carnué offers an opportunity to test the metal artifacts recovered in two excavations conducted in 1946 and 2022 to identify and formulate the likely routes of trade and production techniques that the raw metal or their products took to arrive at the settlement.

Guthrie, Erin (Indiana University)
[72]

A Granular Analysis of Public Comments to Proposed NAGPRA Revisions

In response to stagnated repatriation efforts in the 32 years since the Native American Graves Protection and Repatriation Act (NAGPRA, 43 CFR 10) became law, a new proposed rule to revise implementation regulations was entered into the federal register in October 2022 (RIN 1024-AE19). The rule proposed accelerated timelines for entities holding Native American materials to enter notices, consult with tribes, and repatriate objects and human remains in their possession. Over a comment period of 105 days (inclusive of a three-week extension), 181 written public comments on these proposed changes were submitted. Comments represent input from tribes, the general public, universities, museums, and other individuals and institutions engaged in NAGPRA work. Participation in open comment sessions, discourse at meetings, press coverage, and anecdotal information and experiences can all lend an overall impression of how the proposed rule has been received. This work aims to focus the lens of NAGPRA work in the present moment by providing a granular, objective analysis of the public written comments including comment source, institutional affiliation, length, overall stance on the rule, and trends or commonalities in feedback minutiae. RIN 1024-AE19 is currently in its “Final Rule Stage.”

Gutierrez, Eléa [334] see Czére, Orsolya

Gutiérrez, Fernando [125] see Suzuki, Shintaro

Gutiérrez, Gerardo (University of Colorado, Boulder), Kim Richter (Getty) and Irad Flores
(Universidad Veracruzana)
[248]

Urban Political Systems in the Huastec Region: Large-Scale Settlements and Royal Sculpture

In this presentation we explore political arrangements, settlement organization, and urban dwelling in northern Veracruz during the Postclassic period. We use the spatial distribution of royal Huastec sculpture, and its placement within the sites. We aim to address Huastec cities and urbanism at the local level.

Gutiérrez, Gerardo [273] see Jurado, Erik

Gutiérrez, María (CONICET, INCUAPA), María Clara Álvarez (CONICET-INCUPA-UNCPBA), Cristian Kaufmann (CONICET-INCUPA-UNCPBA), Agustina Massigoge (CONICET-INCUPA-UNCPBA) and Luis Borrero (CONICET-UBA)

[200]

Mortality Profiles from Massive and Attritional Guanaco Deaths in Southern Patagonia, Argentina: Implications for Hunter-Gatherer Archaeology

Mortality profiles are valuable for discussing hunting strategies and the effects of natural deaths on population age structure. Although these studies have been developed over several decades, there is still a lack of actualistic information that allows us to discuss patterns derived from different causes of death. This paper presents modern mortality profiles from natural deaths in the Coyle-Gallegos River interfluvium (southern Patagonia, Argentina). We surveyed guanacos killed by winter stress (493 individuals), entangled on wire fences (53), and guanacos killed by various causes for an unknown number of years in the canyon bottom (33). Unexpectedly, juvenile individuals dominate the mortality profile of winter stress, especially the young of the year, indicating age-selective deaths. Juvenile (0–2 years) and senile (+9 years) individuals are the best represented in the canyon and fence, producing an attritional profile dominated by the most vulnerable individuals of the population. Our actualistic results alert us about the variability of mortality patterns that natural events can generate and invite us to evaluate the different conditions under which these deaths occur and are affected by taphonomic processes.

Gutierrez Lara, Alejandra (GEFA Collective; UConn, El Instituto)

[188]

Questioning Social and Labor Relations in Contract Archaeology from a Feminist Autoethnography

I use an autoethnographic and feminist perspective to reflect on how the field practice of preventive archaeology has been developing in Colombia. I draw on experiences from my own work to question the naturalization of inequalities and violence present in everyday interactions during the implementation of development projects, involving different actors (archaeologists, engineers, and workers). The analysis of these experiences has allowed me to reveal how the epistemological differences between the disciplines of engineering and archaeology are connected to the inequalities of class, gender, and race preexisting in the different contexts in which the trade is developed, resulting in unequal treatment in which the feminine and the masculine are hierarchical categories used to deploy power. These situations are exacerbated by the framework of infrastructure projects, which operate under notions of time and economic efficiency that add tensions between the actors. The reflections I propose to present aim to generate questions about the progress of archaeology as an anthropological discipline and its impact on nation-building, as well as to inquire about the places where academic knowledge is being built and its relationship with the working conditions of those who are doing archaeology in Colombia.

Gutierrez Ruano, Patricio [34] see Snow, Meradeth

Gutierrez-Zugasti, Igor [247] see Straus, Lawrence

Gutoski, Martin

[168]

A 30-Year Search For Pictograph Photos of Moose Creek Bluff in Fairbanks, Alaska

I have been searching for the photographs and tracings made by J. Louis Giddings in June 1940 as reported in *American Antiquity*, Vol. 7, No. 1 (July 1941) since I was an undergraduate student in anthropology at the University of Alaska, Fairbanks (UAF) in 1992. When entering the program for my master's degree in the 2000's I had to content myself that these were not available after years of searching at intuitions that Giddings attended after leaving Alaska. I sent a request to the Haffenreffer Museum at Brown University in March 2023 if there were any of Giddings photos and tracings. In a reply from Rodney (Rip) Gerry, the

exhibition coordinator at archives, he had found the slides and negatives in April 2023 taken of the Fairbanks site by Giddings in June 1940, and in July he had located the original tracings. Locating these I will be applying the program DStretch and other graphic enhancement software to render the images for comparing with the sketches in the 1941 *American Antiquity* report.

Guzman, Rodrigo (University of Central Florida)
[122]

Cultural Settlement and Water Management Strategies at Holtun, Guatemala

Water management is intrinsically associated with the development and support of complex societies. Water was a significant source of power among the ancient Maya. Although traditional research characterizes water management as homogeneous and monolithic, recent studies show that it was highly variable and adapted accordingly. The case of Holtun, a modest-sized site, adds to the research on water management as most case studies focus on large primary centers with significant sources of water. Despite water resources at Holtun are relatively small, they supported the development of a large community. Holtun developed social complexity during the Middle Preclassic period (1000–350 BC) and although some water catchments remained centralized, most of the springs remained outside of formal control on the outskirts of the site. However, during the Late Classic period (AD 500–900), permanent settlement with signs of social status emerged outside of the civic-ceremonial center, claiming territory around water resources. Although the function of this settlement is still not clear, its location suggests that water management was in part a strong motivation. Research on cultural settlement and water management at Holtun demonstrates the complexity and heterogeneity of the ancient Maya civilization in the process of developing and maintaining social complexity.

Guzman, Rodrigo [122] see Kovacevich, Brigitte

Guzmán Torres, Viridiana [79] see Ruiz, Judith

Gyucha, Attila [116] see Ridge, William

Gyucha, Attila [130] see Riebe, Danielle

Gyucha, Attila [141] see Seifert, Jerrod

Haas, Jennifer (University of Wisconsin, Milwaukee), Adrienne Frie and Kevin Garski
[73]

NAGPRA at the University of Wisconsin, Milwaukee and the University of Wisconsin-Oshkosh

This paper provides a case study of NAGPRA implementation within the University of Wisconsin System focusing on two institutions: the University of Wisconsin, Milwaukee, and the University of Wisconsin, Oshkosh. Both institutions have long-standing programs of Midwest archaeology, within their respective anthropology departments, that have generated extensive archaeological collections from hundreds of regional sites. Although both campuses had initiated compliance with the Native American Graves Protection and Repatriation Act and its regulations (NAGPRA) soon after the act was signed into law, it is unclear if any meaningful consultation, documentation sharing, or collection examination followed. Within the past three years, both campuses have recommitted to NAGPRA efforts to effect repatriation all NAGPRA items within their archaeological collections. Concurrently, the UW System developed broader policies to ensure ongoing compliance with NAGPRA as well as engagement with Tribal Nations.

Haas, Jennifer (University of Wisconsin, Milwaukee)
[97]

Moderator

Haas, Randy (University of Wyoming), Jennifer Chen (Penn State), Tammy Buonasera (University of Alaska, Fairbanks) and Jelmer Eerkens (University of California, Davis)
[20]

The Effect of Sex on Diet: Isotopic Variation among North and South American Foragers

The extent to which subsistence labor was divided among archaeological forager populations of the Americas is currently debated. This analysis uses bone isotope chemistry and Bayesian mixing models to examine trophic variation between female and male individuals from North and South American forager populations. We observe that on average male individuals tend to occupy higher trophic levels than females, suggesting differences in subsistence labor. However, we further observe that average meat/plant contributions differed little with considerable overlap in female and male dietary values. The data suggest that sex exerted little effect on diet and, ostensibly, division of subsistence labor among forager populations of the past.

Haas, Randy [306] see Flores-Blanco, Luis

Haas, Randy [145] see Julison, Julie

Haas, Randy [249] see Noe, Sarah

Habicht-Mauche, Judith [287] see Eckert, Suzanne

Hackenberger, Steven [93] see Buvit, Ian

Hadden, Carla [200] see Boal, Zachary

Hadden, Carla [176] see Conger, Megan

Hadden, Carla [232] see Schwadron, Margo

Hadley, Dawn (University of York)
[327]

The Viking Great Army: Weighing Up Reuse

This paper focuses on reuse of material culture looted by the Viking Great Army when it raided England in the late ninth century CE. This material included gold, silver, and copper alloy, which was sometimes melted down to turn into other artifacts and also cut up for use in exchange in the form of bullion. Bullion exchange required weights to portion out the loot. Many of these were fashioned from lead and inset with fragments of jewelry, other decorative metalwork, and coins, often of some antiquity. This paper will survey the range of insets, exploring the messages that were conveyed through their reuse. This will be shown to extend far beyond traditional interpretations that they served a mere decorative function or a means of distinguishing one weight set from another. These lead inset weights were symbols of political authority, sometimes drawing on the authority of coinage. They also reflected the adventures of the army and the places they had visited and peoples they had encountered, in England, Ireland, and on the continent. Some of these inset weights have been found in ritual deposits, including burials, reinforcing the symbolic associations of the weights and their reused insets.

Haecker, Charles, Virginie Renson (Archaeometry Laboratory, MURR) and Jay Stephens
[121]

Lead Isotope Analysis Providing Insights Regarding Pecos Pueblo's Role in Spanish Colonial New Mexico

Pecos was one of the major Puebloan communities in New Mexico from circa AD 1450 until the 1790s. As the nexus of an interregional-intercultural network, this pueblo became a dominant economic force in Pueblo-Plains-Hispanic interactions throughout most of the Spanish colonial period. A metal detection sample survey within the pueblo's midden area produced iron arrow points and lead musket balls, reflecting multiple Comanche and Apache attacks during the eighteenth century. Numerous copper sheet scraps, the detritus from fabricating varieties of objects for both trade and personal use, were also recovered. Lead isotope

analysis was conducted on one lead ball and one copper sheet scrap to determine the likely ore body source(s) of these two metals. Resultant information underscores the socioeconomic and geopolitical complexities that defined Pecos Pueblo during New Mexico's Spanish colonial period.

Haichao, Li (Sichuan University)

[19]

Resource Networks of Sanxingdui

Located in southwest China, Sanxingdui is well known for its outstanding and unique bronzes as well as gold, jade, and other high-value artifacts. However, the origin and circulation of these precious resources have not been disclosed. The author believes that the strategic location contributed greatly to the prosperity of Sanxingdui. It was located at the crossroads of several important civilizations. In the north, the Shang Dynasty connected Sanxingdui with bronzes and other resources. To the south, large amounts of cowries and ivories probably circulated from South/Southeast Asia to Sanxingdui and even transferred further to Yinxu.

Sanxingdui acted as the transfer connection between the south and north. To the west, many ideas and techniques of Sanxingdui such as gold, beaten bronzes, divine trees, and animals were probably related to Central/West Asia. To the east, Sanxingdui connected the cultures in the middle and lower Yangtze River by Zun, Lei vessels, and other items. Together, the different Yangtze River cultures formed a culture belt and interacted with the Shang Dynasty. Sanxingdui formed a complex network with its peripheral cultures that provides a new perspective to better understand the site and region.

Haileselassie Assefa, Sewasew, Ryan Szymanski (Center for East African and Indian Ocean Studies,), Chapurukha Kusimba (University of South Florida) and Xinyi Liu (Washington University, St. Louis)

[201]

An Isotopic Study of Diet at Mtwapa, Kenya (Fifteenth–Eighteenth Centuries CE)

This project investigates the diet and foodways at Mtwapa, Kenya, on the East African coast during the fifteenth to eighteenth centuries. During this period, local East African populations negotiated Portuguese colonialism in the region. Stable carbon and nitrogen isotopic analyses were conducted using bone collagen from 28 individuals interred at Mtwapa, Kenya. $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values suggest individuals from Mtwapa consumed C_4 diets with some reliance on marine resources. Individuals from later family tombs have higher $\delta^{15}\text{N}$ values, suggesting higher consumption of marine protein compared to individuals from earlier tombs. Individuals from earlier tombs also have more C_3 isotopic values relative to later tombs. Isotopic results suggest reliance on local products and terrestrial domesticates with limited dietary differences between sexes.

Haines, Helen (Trent University), Anabel Ford (University of California, Santa Barbara), Thomas Guderjan (University of Texas, Tyler) and Sherman Horn (University of California, Santa Barbara)

[251]

Six Decades of Research into Ancient Maya Settlement in Belize

Nearly 60 years ago Gordon Willey's team published *Prehistoric Maya Settlements in the Belize Valley*, initiating the study of ancient Maya communities with a focus at Barton Ramie in Belize. The lead continues to this day with the first archaeological application of lidar by the Chases at Caracol. These are but two salient examples of the centrality of data collection on Maya settlement emanating from Belize. Scholars working in Belize have led the way in understanding ancient Maya settlement. Documenting the dynamic methodologies and new understandings that have resulted from three katunob of research, this paper presents an overview of the diverse settlement studies supported by the nation of Belize. We show how these significant studies have contributed and influenced a new level of appreciation of the importance of Belize to the knowledge of all lowland Maya prehistory.

Haines, Helen [69] see Howell, Devon

Haines, Julia (Cornell University)

[245]

Co-constitutive Peripheries: Settlement Landscapes of Power and Memory on Mauritius

This paper examines changes in settlement patterns in Mauritius over the seventeenth through twentieth centuries and the ways these landscapes are remembered on the island today. I emphasize agro-industrial landscapes as a specific cultural mode of land use and as a spatial phenomenon that has come to define so much of the contemporary tropical island landscape in Africa and elsewhere. By systematically reconstructing the first century of the partitioning of Mauritius into private estate parcels, colonial administrative centers, and trading ports, I also define the spaces formed between the plantation boundaries as areas where free people of color–built communities, particularly in coastal and mountainous regions. Villages formed later in the nineteenth and twentieth centuries are still named after the estates they once belonged to, having expanded out of or adjacent to the domestic quarters of plantation workers. These names are a residual, a shadow of the colonial plantation still imprinted on the contemporary landscape. As such, plantations and independent villages emerge as co-constituted spaces, each peripheral to the other. More broadly, this paper highlights the intertwining of the industrialization of agriculture, the racialization of labor migrations, urbanism, and how these processes impacted the formation of local communities.

Hair, Amy (Louisiana State University)

[69]

Mapping Structural Vulnerability through Nutritional Deficiencies, Infection, and Burial Location at the Colonial Maya site of Tipu (AD 1543–1707)

Structural vulnerability, an individual or population's risk for adverse health outcomes, is the product of various financial, environmental, biological, and social variables. Factors including disease, food security, exposure to trauma, and social status all contribute to any individual's level of structural vulnerability. While clinicians make modern determinations of structural vulnerability, determining archaeological levels of structural vulnerability requires a more theoretical approach. Tipu, a colonial Maya site in central-western modern-day Belize, was occupied from the Postclassic (~AD 900) until AD 1707. The site sat at the edge of the Spanish colonial world, providing Tipuans with a buffer from the traditional disease, death, and warfare narrative. Despite Tipu's distance from major colonial powers in the northern Yucatán, decades of research at the site have suggested a varied social experience for those living on the colonial frontier. This poster explores how structural vulnerability can be used in bioarchaeological investigations and, specifically, how structural vulnerability can shed light on burial patterning for the over 500 individuals interred at the site of Tipu.

Haire, Elizabeth

[171]

The Chitimacha Migration to the Eastern Atchafalaya Basin

This poster delves into the complex history of the Chitimacha Tribe, tracing their migration and cultural transformation in the face of colonization. The arrival of the French marked a pivotal moment, introducing diseases, displacement, and cultural assimilation to the tribe. This research synthesizes historical documents, archaeological findings, and georeferenced maps to unravel the tribe's migration journey to the eastern Atchafalaya Basin. Through historical analysis and spatial visualization, the study explores how the Chitimacha navigated their changing environment and power dynamics with neighboring tribes. Utilizing historical accounts from figures like Swanton, Gatschet, and Swadesh, as well as georeferenced maps, this research underscores the importance of interdisciplinary methods in understanding the Chitimacha Tribe's past. By depicting settlement patterns over time, the study contributes to the knowledge of the tribe's history while recognizing the gaps in existing research. The findings shed light on the tribe's past and emphasize the need for continued collaboration with the Chitimacha community. Acknowledging the limitations of historical maps and documents, this work advocates for the inclusion of Indigenous voices and perspectives in reconstructing

their history. This study paves the way for deeper exploration, cultural revitalization, and cooperative research that empowers the Chitimacha Tribe to reclaim their silenced narrative.

Hajic, Edwin (GeoArc Research) and Thomas Styles (GeoArc Research)
[204]

Interrelationships among Histories of Landscape Evolution, Environmental Change, and the Cultural Record in the Illinois River Valley and Beyond

Stuart Struever's Foundation for Illinois Archeology (FIA) and subsequent Center for American Archeology (CAA) programs were incubators for interdisciplinary research including intensive geoarchaeological research. Following Struever's vision, program geoarchaeologists were allowed free rein to explore, develop, and apply methodologies to document histories of landscape evolution, depositional environmental contexts of cultural deposits, and their interrelationships in the regions' large alluvial valleys and related upland systems. Approaches were developed and applied in early years to Koster and other sites, landforms, and landscapes in the Illinois and Central Mississippi River valleys, their tributaries, and surrounding uplands. Subsequently, these methodologies and models were improved, practiced, and applied far and wide by at least six former members of the CAA geoarchaeology family tree. Wide-ranging results include recognition of midwestern patterns of alluvial and colluvial fan sedimentation, soil formation, and prehistoric human settlement. Our research shows the significance of observational scale, demonstrates the stratigraphic predictability of landform sediment assemblages in large river valleys, and identifies changing valley environments through time and their relationship to prehistoric settlement and resource use. We also show the significance of valley and upland erosion surfaces to site distribution and context and document the southernmost periglacial features in central North America.

Halcrow, Sian (University of Otago, New Zealand), Megan Southorn (University of Otago, New Zealand), Stephie Loncar (University of Otago, New Zealand), Emma Sudron (Griffith University, Australia) and Chris Smith (University of Otago, New Zealand)
[246]

Forgotten Children: Infant Skeletal Legacy Collections of the W. D. Trotter Anatomy Museum, New Zealand

Infant skeletal remains in anatomical legacy collections can provide an important source of historical information on the interactions of gender, class, and religion during pregnancy and infant loss. Founded in the nineteenth century, the W. D. Trotter Anatomy Museum at the University of Otago houses more than 2,000 models and anatomical "specimens." This research aimed to provide an inventory of the fetal and infant skeletal remains, identifying their provenance through archival analysis of accession data and an investigation of the social context of collection. Collated, this information was related to their bodies' likely path of acquisition by the University. An osteological analysis was carried out to assess the minimum number of individuals, estimate age-at-death, and evidence for pathology and dissection. Most of the infants within the collection died around the time of full-term birth, and some have evidence for developmental pathology, birth trauma and/or postmortem dissection. These remains went through a process of commodification and objectification resulting in their retention as developmental teaching "specimens" and examples of pathology. The historical context and legislation around body donation suggests structural inequality played a role in the acquisition of these infants' remains from their mothers, who were primarily poor and unmarried.

Halcrow, Sian [115] see Southorn, Megan

Hale, Madeleine (University of Oklahoma)
[165]

Object Itineraries of Metal Artifacts from the Stark Farm Site Complex (22OK778)

Object itineraries allow archaeologists to analyze material culture with less bias, while acknowledging both Native and archaeological perspectives, by considering the many different contexts through which an object moves in time and space. In this paper, I focus on creating a deeper understanding of European-made metal

objects uncovered at Stark Farm (22OK778), a site occupied from the Late Mississippian period through the Early Contact period in northeastern Mississippi, by using an object itinerary theoretical framework. I examine how European-made metal objects were transformed and used by the Chicasa as a way to introduce a more collaborative and holistic approach to the other analytical methods being used at Stark Farm. This process was completed using robust statistical analysis and contextual analysis to investigate how the agency and movement of these European-made objects were transformed as they entered Indigenous contexts and interacted with different people, places, and things.

Hall, John [43] see Jalbert, Catherine

Hall, Thomas (DePauw University)

[17]

Discussant

Hallahan, Adyn (Western Michigan University) and Michelle Hrivnyak (Western Michigan University)

[282]

An Investigation of Bone Preservation as a Result of Environmental and Cultural Variables in Mortuary Contexts

This study investigates preservation and molecular integrity of bone through an experimental study focused on variation in mortuary practices. The objective of this study examines how different mortuary rituals affect bone preservation, particularly in an area with a freeze/thaw effect, and how simulated mortuary contexts will impact the stable isotope values in bone. Modern pig rib bone samples were used as a proxy for human bone, in order to address these questions. Each sample was incorporated into a uniquely reconstructed burial environment. These environments include burial in a coffin, submersion in freshwater, burial in peat moss to simulate purposeful deposition in peat bogs, simple deposit in soil, ground surface exposure, and cloth wrapping simulating postmortem body processing/mummification. The methods of the experiment involved recording of pre-analysis control samples for baseline preservation and stable isotope signatures. Results are then compared to the postdepositional samples that have been in their simulated environments through a range of seasonal variation. The results provide insight into the varied factors that can influence bone preservation due to different environmental and culturally constructed mortuary conditions.

Halligan, Jessi (Texas A&M University)

[316]

Chair

Halligan, Jessi (Texas A&M University)

[316]

Updates on the Geoarchaeology of the Latest Pleistocene and Earliest Holocene at the Page-Ladson Site, Florida

The Page-Ladson site in the Aucilla River basin in northwestern Florida, a drowned terrestrial locality, contains strata with well-preserved organic materials in archaeological contexts, allowing us to create absolute cultural chronologies, re-create paleoenvironments, and discuss human subsistence strategies. For the past several years, we have been investigating a cultural component in a soil that has ages spanning the Younger Dryas and earliest Holocene and is located 4–6 m below the modern water line, extending previous research the site. The soil contains multiple diagnostic artifact styles, indicating repeated reuse of this key landscape localities, and provides some of the few radiocarbon ages in the entire US Southeast for several diagnostic styles. In 2022, a Suwannee point was found in association with numerous wood fragments, allowing the first absolute ages to be obtained for this type. This paper summarized our recent investigations at the site.

Halligan, Jessi [82] see Cook Hale, Jessica

Halligan, Jessi [82] see Smallwood, Ashley

Halling, Christine (Louisiana Department of Justice)

[300]

Chair

Halling, Christine (Louisiana Department of Justice) and Ryan Seidemann (Louisiana Department of Justice)

[300]

Practicality in the Enforcement of Human Remains Trafficking in Louisiana

The Louisiana Department of Justice (LDOJ) has routinely monitored online sites for trafficking of human remains and antiquities since 2007. Since that time, new state laws have been enacted to strengthen the ability to confiscate illicit materials from private sellers and, when appropriate, to transfer those materials to descendant communities. During this time, LDOJ employees have been involved in over 100 cases regarding the wayward disposition of human remains and antiquities, not all of which are nefarious. Often consultation and providing a repository for items in transit provides all the protection these items need, ultimately keeping them safeguarded from further commodification. Given the unique legal position of LDOJ, its anthropologists are able to work directly with law enforcement around the state to investigate and enforce aspects of this trade. This enforcement provides scenarios where anthropological theory meets meaningful and practical realities. Here we present three case studies that highlight a variety of recovery scenarios, the approaches and resources required for action, and why resolution has or has not occurred. Through these studies, we are able to examine new trends in enforcement and the functionality of new and existing laws and discuss the practicality of establishing similar methods in other jurisdictions.

Halling, Christine [131] see Seidemann, Ryan

Halling, Christine [300] see Wellons, Sovi-Mya

Halperin, Christina (Université de Montréal)

[246]

Chair

Halperin, Christina (Université de Montréal), Katie Miller Wolf (University of West Florida) and Maria Fernandez López López (Universidad de San Carlos de Guatemala)

[246]

Precious People: Indigenous Medical-Spiritual Relations in the Archaeology of Maya Childhood

Previous studies of bodily ornaments from burial contexts have often fixated on notions of wealth, social inequality, and prestige. Although we consider analyses focused on economic wealth, we turn, in particular, to Indigenous and ladino (mestizo) medical-spiritual understandings of bodily ornaments. We find that this perspective is best understood from the perspective of children. This paper examines the marine shell, bone, ceramic, and stone bracelets and necklaces of children from Late and Terminal Classic burials at the Maya site of Ucanal, Petén, Guatemala, and compares them to burials from a range of time periods throughout the Maya Lowlands. By incorporating ethnographic and ethnohistoric research on Indigenous Maya and ladino medical-spiritual practices and acts of care, we underscore the relational understandings of Maya ornaments worn by children and their role in the articulation of caring relations between parents and their precious children, in repelling spiritual forces and winds carrying illnesses, and in the making of social persons. While attention and respect for Indigenous medical-spiritual practices are slowly but increasingly recognized in contemporary medical practices in Guatemala, Mexico, and elsewhere, archaeological perspectives also benefit from multivocal perspectives on children and their well-being.

Hamilton, Derek (University of Glasgow, SUERC), Sophia Adams (British Museum), Kerry Sayle (University of Glasgow, SUERC) and Katharine Steinke (University of Edinburgh)
[42]

Developing Temporally Relevant and Spatially Robust Sulfur ($\delta^{34}\text{S}$) Isotope Baselines for Archaeological Studies of Residence and Mobility

Many of the central questions of archaeology engage directly with themes relating to movement, mobility, and migration. The two most common isotope systems that have been exploited for this purpose are strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) and oxygen ($\delta^{18}\text{O}$), with sulfur isotopes ($\delta^{34}\text{S}$) being a much more recent addition to the isotopic arsenal for investigating residence and mobility. Because the application of sulfur is not limited solely to tooth enamel, by targeting skeletal tissues that represent different periods in an individual's lifetime, it has the possibility of directly tracing residence, isotopically, an individual throughout a lifetime. The poster presented here demonstrates that in the rush to apply this isotope system to past remains our overall appreciation of the natural variability of $\delta^{34}\text{S}$ in the environment has not been well characterized, which may be leading researchers to developing archaeological narratives and broad models of $\delta^{34}\text{S}$ variations across regions that are "importantly wrong." Furthermore, it presents methods for developing more robust baseline data for interpreting archaeological $\delta^{34}\text{S}$ values, thusly moving the state-of-the-art forward.

Hamilton, Marcus (University of Texas, San Antonio)
[308]

On Effective Theories of Macroarchaeology

Archaeology reconstructs human behavior in the past from a biased, sparse, and fragmentary record, at multiple scales of space and time, from site-specific local events, to regional, continental, and global patterns. However, in practice, it is not always clear at which scale we are asking archaeological questions, and how different scales are integrated by theory. Across the sciences, the prefix "macro-" (i.e., macroeconomics, macrophysics, macroevolution, and macroecology) refers to the macroscopic dynamics that emerge from lower level processes as we coarse-grain to larger scales. Effective theories are the invariant dynamics that allow us to generalize and renormalize across scales, the fundamental set of dynamics preserved as we coarse-grain: how do the general properties of one scale influence the general properties of other scales? I discuss how an integral aspect of the proposed "macroarchaeology" must be centered on the development of effective theories.

Hamilton, Marcus [332] see Kilby, David

Hammer, Emily (University of Pennsylvania)
[130]

Marshlands and Early Mesopotamian Urban Form

The marshlands of the Tigris-Euphrates delta were for millennia among the largest wetland systems in Eurasia. The Gulf coast, the river delta, and marshes extended further north ca. 8000–2000 BCE than they do today. As a result, the world's earliest cities in southern Mesopotamia may have emerged 6,000–5,000 years ago within or on the edge of wetland and littoral zones. Cuneiform texts, archaeological evidence, and geoarchaeological data make clear that marsh resources were central to some early cities' economies. In this paper, I consider how a wetland environment, and later environmental shifts, may have affected early Mesopotamian urban form. Remote sensing and survey data demonstrate that the third millennium BC city of Lagash (Tell al-Hiba) was composed of spatially discrete sectors bounded by multiple surrounding walls and watercourses and separated by open spaces. The evidence is suggestive of a marshy or watery local environment, corroborating geographical reconstructions from cuneiform texts. The discontinuous, walled nature of inhabited areas differs from the nucleated form of later Mesopotamian cities and would have had social and logistical ramifications for inhabitants. Spatial ethnoarchaeological observations collected from archival images (1950s–1970s) of recent Iraqi marsh settlements aid in interpretation of the archaeological data.

Hammerstedt, Scott [279] see Regnier, Amanda

Hampson, Daniel (Binghamton University SUNY)

[207]

Blazing New Trails: Rethinking the Extent of the Ancestral Pueblo Road Network in the Northern San Juan Region

Historically, research on prehistoric roads in the southwest has been heavily focused on Chaco and the San Juan Basin, however, these enigmatic anomalies extend into the Central and Western Mesa Verde Regions as well. Lidar data for the Four Corners area has made it possible to peer through the trees and shrubs of the Great Sage Plain and observe the surface traces of previously unrecognized segments of roads. These new finds provide context for the organization of the great house system in the north, highlight differences between areas of the wider prehistoric world, and may even give us clues about the roads' significance. When considered at a regional scale, the extent of these features paint a picture of a highly integrated society that had the organizational power to complete massive and complex infrastructure projects through intercommunity cooperation.

Hampson, Daniel [284] see Baldner, Linnea

Hampton, Ashley (Hamilton College)

[209]

Queer Imaginatives, Normative Narratives: Examining Archaeological Theory and Conceptions of Hunter-Gatherer-Fisher Labor and Social Identity

Archaeology's role and capacity to present multiple narratives about the past situates the discipline as a locus for competing power dynamics: What stories about the past are prioritized? How are stories constructed? Which stories are utilized for crafting a generalizable theory about "human nature"? At the same time, contemporary archaeology has recognized the need for multivocality in cultural heritage narratives and material interpretation. In this paper, I broach these matters by examining ways queer theory has been integrated within hunter-gatherer-fisher studies and the effectiveness of new knowledge production in changing archaeological perspectives. I do so by analyzing major journal publications, introductory archaeological textbooks, and public history projects as archival evidence for the discipline's production of knowledge and assess how normative frameworks are created and perpetuated in conceptualizations of past labor and social identity. In so doing, this paper assesses the manners in which contemporary archaeological theory is interrupting narratives that circulate in wider public domains—and the limits of this interruption. I conclude with making room for lively queer imaginatives to stretch and bend these limits.

Hampton, Ashley (Hamilton College)

[209]

Chair

Hampton, Ashley [304] see Prentiss, Anna

Han, Le Ngoc [289] see Menkina, Ekaterina

Handcock, Fred [172] see Burnett, Jeff

Handley, Jordan (Stantec)

[49]

Chair

Handley, Jordan (Stantec) and Norman Easton (Yukon University)**[120]***The Formation and Distribution of a Chindadn Component Tool Assemblage: Insights from Microwear Analysis*

This paper presents the results of an extensive use-wear analysis of the lithic assemblage recovered from the Chindadn component at the Little John site (KdVo-6). Within the context of Little John, this component dates from the Late Bølling Allerød Interstadial to the Younger Dryas (14,300–11,900 RCYBP). The study population included 219 specimens from five tool classes assigned via traditional macroscopic attributes, including 1) bifacial tools, 2) cores, 3) flakes, 4) flake tools, and 5) modified pebbles and cobbles. Results of this analysis identified a sub-assemblage of 60 used tools via microscopic use wear. Spatial distribution of this sub-assemblage was subsequently mapped revealing further insights into assemblage formation and intrasite distribution of Chindadn lithic technology. Regional archaeologists have been promoting detailed analyses of lithic assemblages dating to the earliest cultural occupations of Eastern Beringia, which remain elusively defined and an area of debate. The results of this study indicate that use-wear analysis has potential to advance understandings of the technological organization of these early occupations.

Handziuk, Natalia (University of Notre Dame)**[169]***Olive Oil and Urbanism: Specialized Production in Late Fourth Millennium Southwest Asia*

During the Early Bronze Age (3800–2000 BCE) southern Levantine agricultural infrastructure developed on a region-wide scale to facilitate the accumulation of surpluses in the newly emerging urban landscape. Olive oil grew to be an important staple and luxury product. This discussion focuses on an EB IB (3300–3050 BCE) olive oil production site in northern Jordan where rock-cut features in the countryside were uniquely sealed with in situ materials by a collapse event. I reconstruct the olive processing and oil production based on rock-cut features, architecture, lithics, and reconstructable ceramic vessels. A combination of vessel production analysis (Roux 2019) and assessment of function, aided by organic residue analysis by gas chromatography–mass spectrometry (GC-MS) is employed to reconstruct olive oil production and consumption habits at the site. By elucidating how different pottery types were used in olive oil production and storage, I suggest these processes can be identified in other archaeological contexts through ceramic assemblages. I use the EB IB olive press to discuss the relationship between the ceramic assemblages, arboriculture, surplus accumulation, and emergent urbanism during the southern Levantine Early Bronze Age.

Handziuk, Natalia [294] see Abu Jayyab, Khaled

Hangan, Margaret (Tonto National Forest)**[144]***Moderator*

Hanks, Bryan [283] see Messinger, Emma

Hanna, Jonathan [244] see Hayward, Michele

Hannigan, Elizabeth (Phaleron Bioarchaeological Project ICF), Jane Buikstra (Arizona State University), Eric Bartelink (California State University, Chico), Paraskevi Tritsaroli (Wiener Laboratory for Archaeological Sciences) and Hannah Liedl (Durham University)**[241]***The Archaic Period Diet: Preliminary Isotope Results for Adult Individuals from the Phaleron Cemetery*

While the Archaic (700–480 BCE) was a transformative and tumultuous period in ancient Greece, there is a considerable lack of paleodietary studies for this time. The recent excavation (2012–2016) of ~1,500

individuals from the Archaic period Phaleron cemetery in Athens provides a means of illuminating the dietary habits and social organization of Archaic Greek individuals. For this presentation, we use stable isotope analysis to infer the temporal dietary patterns of ancient Greece and the dietary habits and social organization of 60 adult individuals from the Phaleron cemetery. We will address two research questions: (1) Do dietary signatures in ancient Greece significantly change over time? and (2) Are there significant differences in the dietary signatures of the Phaleron individuals according to grave type, skeletal sex, and age categories? The bioapatite carbon data and the results of statistical analyses suggest that there were no significant differences in dietary signatures between the Archaic period Phaleron individuals and Classical period individuals. Results regarding grave type, skeletal sex, and age categories are forthcoming. The lack of viable collagen data from this study limits our interpretations and demonstrates the importance of investigating alternative preparation protocols for stable isotope analysis of poorly preserved bone.

Hannigan, Elizabeth [241] see Hayes, Leigh

Hannold, Cynthia (University of Alabama) and Francisco Estrada-Belli [164]

An Analysis of Maya Eccentric Forms from the Holmul Region, Petén, Guatemala

Geometric, anthropomorphic, zoomorphic, and abstract forms comprise the variety of lithic silhouettes of Central America. Commonly called eccentrics, these elaborate, technically remarkable forms are often recovered from ritual offerings and elite burials. This paper addresses more than 60 eccentrics recovered in the Holmul region, primarily from the sites of Holmul and Witzna, and identifies ways that these forms can inform ritual practice, symbolic significance, and potential communities of craftspeople. Eccentric size, thinning, skill of execution, and material choice are considered across multiple assemblages.

Hannold, Cynthia [282] see Stoker, Owen

Hanratty, Colleen (Maya Research Program) and Thomas Guderjan (Maya Research Program) [213]

Searching for Marketplaces at Blue Creek and Xnoha

Marketplaces are a vital component for the economic interdependence of ancient Maya kingdoms. In our view, marketplaces were also definitional components of Maya central places of power as much as the presence of ostentatious presentations of architecture were. The Blue Creek Archaeological Project has been investigating multiple aspects of ancient northwest Belize for three decades. In this presentation, we will discuss the five central places of power we have identified and focus on the sites of Xnoha and Blue Creek, where we are participating in the marketplace project by testing soils and other variables to identify these features.

Hanratty, Colleen [32] see Guderjan, Thomas

Hanselka, Kevin (Texas Department of Transportation), Leslie Bush (Macrobotanical Analysis), Chlöe Fackler (Texas A&M University) and Phil Dering (Shumla Archaeological Research & Education Center) [332]

Shaded Canyons and Mesquite Fires: 13,000 Years of Ethnobotany in Eagle Nest Canyon

The value of several significant archaeological sites investigated by the Ancient Southwest Texas Project in Eagle Nest Canyon (Val Verde County, Texas) is a testament to the conservation and stewardship of landowners Jack and Wilmuth Skiles. From the beginning it was anticipated that these investigations would yield an ample archaeobotanical assemblage, as perishable plant materials are preserved in several dry rockshelters in the canyon. These fragile remains provide a unique perspective into the nuanced relationships between plants and the ancestral Indigenous peoples of the Lower Pecos Canyonlands. The exquisite

preservation, abundance, and diversity of the remains require a dedicated archaeobotanical program. Results thus far verify that the primary plant foods prepared in earth ovens consisted of desert rosettes, such as lechuguilla and sotol. Diversity of fuelwood indicates opportunistic selection of all available local resources, rather than preference for particular species. The assemblage suggests that the late Pleistocene landscape was characterized by taxa common in the area today, though with perhaps a larger proportion of woody plants. Use of mesquite in cooking features is verified at ca. 13,000 years ago. A solid foundation for future archaeobotanical work is in place thanks to the stewardship and generosity of the Skiles family.

Hansell, Patricia (Temple University)

[222]

The Curation and Preservation of Archaeological Materials from Panama: Challenges and Opportunities

The Smithsonian Tropical Research Institute (STRI) in Panama has become a key repository for archaeological materials collected within the country over the past 50 years. A number of these collections are also currently housed outside of the country at Temple University in Philadelphia. The keepers of the collections at Temple are faced with the task of returning these materials and associated documents to Panama in a state that is compatible with STRI's repository guidelines. This will require a significant amount of work as materials range from the artifacts themselves to the field records associated with their collection and the laboratory records associated with their analyses. The return of these materials to Panama will be a major step forward for the preservation of the country's cultural heritage. Proper curation of these collections and digital technologies will allow for better documentation and access to them for researchers and scholars as well as enhancing public awareness of Panama's rich history. This paper reports on the process and progress made on this collection's journey from curation at Temple to ultimate preservation at STRI.

Hansen, Annette [256] see Heinrich, Frits

Hansen, Daniel (University of Chicago)

[327]

Beyond Reuse: Reengagement and Interdiscursivity in the Pictish Built Environment

Recent archaeological work on the people known as the Picts of northern Britain (ca. 300–900 CE) has revealed that many of the Picts' characteristic monuments and structures made use of materials previously made significant in prehistory. A portion of the Pictish "symbol stones"—a class of stone monuments bearing a distinctive iconographic repertoire—were crafted from prehistoric megaliths, while Pictish period hillforts are often modifications of Iron Age enclosures. Scholars have speculated on the relevance of these practices to identity formation and legitimation in this period, with Pictish elites possibly positioning themselves in relation to the prehistoric past. Yet, to focus solely on reuse risks ignoring other practices which may partake in similar kinds of signification. Symbol stones are often placed near or within prehistoric sites, while "new" Pictish hillforts bear formal resemblances to Iron Age constructions. Drawing on insights from semiotic anthropology, this paper places Pictish period reuse within a broader category of interdiscursive phenomena including citation, imitation, and reappropriation. It examines spatial statistical results from a study of symbol stones and hillforts, traces these features' possible modes of interdiscursivity, and sketches hypotheses for the relevance of these modes to processes of identity-making in the Pictish period and beyond.

Hansen, David (University of Colorado, Boulder) and Eric Jones (University of Colorado, Boulder)

[171]

Death in a Time of Transition: A Spatial Analysis of Mortality in Fenner, NY, from 1850 to 1880

Historical and anthropological demography has long focused on the spread of infectious disease in urban spaces across time. However, few studies have examined disease in rural contexts over time. Using census records, township maps, and archaeological data to map locations and causes of death in GIS, this project

examines mortality from chronic and infectious disease in Fenner, New York from 1850 to 1880. This project aims to address the following questions: What is the epidemiological landscape of rural New York during the mid to late 1800s? Is it consistent or does it change over time? Is there spatial patterning of disease across time or during specific census years? We find differential mortality patterning in this rural farm community when compared to nearby urban sites from the same period. Rather than widespread mortality crises from infectious disease, small, localized mortality clusters are present within one or two households. We also find no temporal patterning in disease prevalence in any given census year, with the exception of tuberculosis, which decreased in prevalence over time. This project provides new insights into the mortality landscapes of rural spaces during the Second Epidemiological Transition.

Hanson, Kelsey [56] see Mills, Barbara

Hanson, Tegan (Louisiana State University) and Sherry Higgins (Chitimacha Tribe of Louisiana)

[104]

Vegetation Survey Methods at Inland Shell Mound Sites

Reconnaissance and initial phase fieldwork for the Gulf Resilience COPE Research HUB began in 2022 and continued in summer 2023. Experimental investigations into potential variations in vegetative vigor, abundance, diversity, and density at a local archaeological site in the Atchafalaya Basin is underway. New and old techniques are employed to determine the floral signature under heavy, old growth canopy, to identify any correlations with cultural features, and to potentially mark culturally modified landscapes.

Haoa Cardinali, Sonia [18] see Martinsson-Wallin, Helene

Hard, Robert (University of Texas, San Antonio) and John Roney

[149]

Karen Adams and Early Agricultural Period Research: A Synthetic Approach Using Niche Construction Theory

In the last 30 years Early Agricultural period research has documented a series of substantial early farming settlements in four river valleys: the Santa Cruz in the Tucson Basin, the Río Boquilla at La Playa in northern Sonora, the Río Casas Grandes in northern Chihuahua, and the Upper Gila River in southeastern Arizona. These four valleys can be viewed as part of a larger Early Agricultural period Riverine Phenomenon. Karen Adams's collaborations with us and other teams have played a critical role in developing this rich record. We use these data to argue that the developments in these four valleys are consistent with niche construction theory as outlined by Bruce Smith and Melinda Zeder. We briefly review these four cases, and suggest that niche construction theory is a useful, but incomplete, framework for understanding these processes. We conclude by showing that Karen Adams's thoughtful and meticulous paleobotanical contributions were fundamental to a new understanding of these watershed developments in the archaeology of Northwest Mexico and the US Southwest.

Harding, Makayla (University of Queensland), Andrew Fairbairn (University of Queensland), Nathan Wright (University of New England, Armidale, Australia), Trudy Goringe (Mithaka Aboriginal Corporation, Windorah, Queensla) and Josh Goringe (Mithaka Aboriginal Corporation, Windorah, Queensla)

[256]

Building a Novel Archaeobotanical Framework to Investigate the History of Plant Foods in Aboriginal Australia

With a wide variety of biomes and extreme fluctuations in water availability, Australia's Channel Country saw Indigenous Australians develop a unique suite of subsistence strategies to live in this environment. Ethnohistoric accounts report combinations of semipermanent habitation and seasonal mobility, intensive

seed collection, storage and grinding, leading to claims that Channel Country saw the development of agriculture. Determining the nature of precolonial Indigenous food production has potential to rewrite understandings of subsistence regimes across the continent, but an understanding of plant exploitation in Australia has been largely ethnographic in the past. Archaeobotany is rarely utilized; there is widespread belief that plant remains are not preserved in Australia. In this presentation we discuss a research project in which flotation and dry sieving are being used to extract plant remains from *gunyahs* (houses) and open-air camps, from a range of biomes across Mithaka Country in southwest Queensland. We aim to identify food taxa present, and develop a framework for empirically distinguishing plant collection, management, cultivation, and domestication in precolonial Australia. Drawing on the macrofossil record, this paper presents our preliminary results, including a predictive approach for identifying forms of plant use and the first results of seed analysis from the *gunyahs*.

Hardy, Heather [49] see Esdale, Julie

Hare, Timothy (Morehead State University)

[74]

Discussant

[321]

Chair

Hare, Timothy (Morehead State University)

[321]

Refining Airborne Laser Scanning Data to See through Mayapán's Dense Vegetation

I present a workflow for optimizing the classification of airborne laser scanning point data and the selection of appropriate surface visualization techniques to improve the identification of archaeological and environmental features at the Postclassic city of Mayapán. The initial 2013 digital elevation model enabled the identification of thousands of structures in and around the city. Still, ground-checking revealed that the dense canopy and low vegetation obscured many structures and walls in parts of the study area. Starting with the raw laser scanning data, I developed a systematic workflow for testing different point classification methods and visualization techniques to improve feature identification in areas with different surface vegetation types. No single ground point classification or surface visualization method is best. Specific combinations of point classification methods and visualization techniques can be tailored to different surface conditions to improve feature identification. I found that three different point classification methods and a set of visualization techniques produced the best results across the varied surface conditions of the study area. The results of this project are the identification of hundreds of previously hidden features that, after additional field-checking, will contribute to answering broader research questions and support additional research in and around Mayapán.

Hare, Timothy [172] see Darbyshire, Samuel

Hare, Timothy [32] see Masson, Marilyn

Hargrave, Eve (NAGPRA Office/OVCRI University of Illinois, Urbana-Champaign), Aimée Carbaugh (University of Illinois) and Krystiana Krupa (NAGPRA Office/OVCRI University of Illinois)

[72]

Building Relationships and Sharing Information: A Gathering of the Midwest NAGPRA Community

The first NAGPRA Community of Practice, established in 2019 through the University of Denver, illustrated the vital role communication, listening, and learning plays among institutions and tribal partners as we move forward in fulfilling our NAGPRA responsibilities, including ensuring the return of Native Ancestors and cultural objects. The need for regionally focused communications between institutions, tribal communities,

and interested parties quickly became evident and in 2021 the Southeastern NAGPRA Community of Practice was formed. Since that time, individual states such as Colorado and Wisconsin have also formed statewide groups to discuss and share information relevant to NAGPRA. The Midwest NAGPRA Community of Practice was initiated in summer 2023 with the goal of facilitating improved communication among midwestern institutions, historical societies, and tribal communities regarding best practices, information sharing, and relationship building. Our poster summarizes how we started the Midwest NAGPRA Community of Practice, our goals, future initiatives, and the progress that has been made during the Community's initial year.

Hargrave, Eve [300] see Carbaugh, Aimée

Hargrave, Michael, R. Berle Clay (Cultural Resource Analysts Inc.), Rinita Dalan (Minnesota State University, Moorhead) and Diana Greenlee (University of Louisiana, Monroe)
[283]

Layout, Construction, and Rebuilding of Landscape Features at Poverty Point World Heritage Site

Questions persist about the layout and building sequence of Poverty Point's landscape features, and the planning and rapidity of overall site construction. A research program using geophysics, stratigraphic coring, lidar, and targeted excavation that began in 2006 continues to yield new data and interpretations about the ridges, timber circles, plaza, and other features. Magnetic survey reveals that the concentric ridges are comprised of smaller components roughly analogous to mound construction stages. Innermost ridges 1 and 2 include multiple, contiguous, and overlapping components, whereas the outer ridges have fewer, more consistently aligned components. Some aisles in ridges 1 and 2 may have been added after ridge construction. Many of the timber circles are clustered near the aisle and plaza intersections, but other circles are interspersed with ridges 1 and 2 and suggest organic growth. The rebuilding of some ridges and many timber circles, massive filling to raise portions of the plaza, and new information about the Mound E Ridge and West Plaza Rise, suggest a protracted and complex construction history.

Hargrave, Michael [24] see Greenlee, Diana

Harke, Ryan

[229]

A History of Archaeology on Key West

The island of Key West has a rich and fascinating history as the "southernmost point" of the continental United States. Because of its strategic and iconic location, Key West is the most heavily developed and altered island in the Florida Keys. Despite the island's infamy and storied past, neither Monroe County nor Key West City employ an archaeology preservation program for municipal or private lands. As a result, it is unknown whether intact pre-European archaeological deposits exist on the island. In this paper, I discuss the archaeology and environmental history of Key West and offer research directions for the future.

Harkness, Rebecca (University of Arizona)

[111]

Chair

Harkness, Rebecca (University of Arizona)

[111]

Embedded Identity: Preliminary Analyses of Mogollon Corrugated Vessels

Between 1250 and 1450 CE, the cultural landscape of the US Southwest transformed as diverse communities migrated from their homelands into areas with long-established local populations. The processes behind this new shared multicultural identity were complex and required individuals from both migrant and local Mogollon communities to negotiate diverse traditions. This paper examines Arizona State Museum

corrugated-ceramic collections from before and after this period to investigate identity in these diverse communities. In my preliminary data, I consider attribute variation of whole corrugated vessels in the Mogollon region, from the fine-grained analysis of how the coiling was achieved to their overall design. My study seeks to give corrugated ceramics in the Point of Pines area and Arizona Highlands the same level of scrutiny as painted ceramics using indicators of identity embedded in their production with communities of practice as a theoretical framework. I analyze each vessel for production practices, form, and design using a portable magnification tool, profile gauge, measuring stand, and digital rollouts. Given the complexity of corrugated wares, their widespread use, and the visibility of the designs, I hypothesize that people used the decorated forms of these wares to negotiate their identity in multicultural communities across the Mogollon region.

Harkness, Rebecca [111] see Renaud, Jared

Harrach Harcourt, Ilaria [270] see Jankiewicz, Stephen

Harris, Khadene [82] see Galle, Jillian

Harrison-Buck, Eleanor (University of New Hampshire), Marieka Brouwer Burg (University of Vermont) and Samantha Krause (Texas State University)
[295]

Life on the Edge: Fifty Years of Belize Wetland Archaeology

In the early years of Maya archaeology, Belize was considered peripheral, and the wetlands were at the far edge of this pseudo-backwater. It was not until Turner and Harrison's seminal study of Pulltrouser Swamp in the 1970s that Belizean wetlands moved from the edge to center stage in Maya archaeology. Northern Belize contains some of the largest tracts of wetlands in the Maya Lowlands, providing rich repositories of well-preserved pollen, phytoliths, and macrobotanical remains, which have yielded some of the earliest evidence of Maya cultivation. Geomorphological studies have greatly advanced our understanding of the construction, use, and abandonment of Maya ditched and drained fields in Belize. In recent years, lidar mapping and other geospatial tools have shown that wetland modifications in Belize were much more complex and expansive than previously thought. Our own investigations in Northern Belize's Crooked Tree Wildlife Sanctuary reveal wetland enhancements were not only vast but varied in use, with some serving primarily as large-scale fish-trapping facilities, rather than as agricultural fields. In tracing the last 50 years of wetland investigations, we show how research in Belize has moved the field forward and continues to be at the forefront of cutting-edge scholarship across the Maya Lowlands.

Harrod, Ryan [7] see Schenkenberger, Kaelyn

Harry, Karen (University of Nevada, Las Vegas)
[103]
Chair

Harry, Karen (University of Nevada, Las Vegas), Michael Terlep (Kaibab National Forest) and William Bryce (Southwest Archaeology Research Alliance)
[103]

Cave du Pont and the Western Basketmaker World

Over the last two decades, new archaeological findings have challenged traditional ideas about the Western Basketmaker culture. We now know that the processes involved in the origin and spread of early farming in the western Puebloan region were much more complex than previously recognized. Rather than resulting

from a single wave of migrations that brought in a homogenous culture and lifeway, the new data suggest that corn and Basketmaker II materials spread through processes that included both migration and diffusion. In this poster, we present new information from the Cave du Pont site to explore the identities and lifeways of the people who used that cave. These findings are then compared against those of other Western Basketmaker II sites to explore the place of Cave du Pont in the Western Basketmaker world.

Harry, Karen [103] see De Cespedes, Manuel

Hart, Isaac (University of Utah), William Taylor (University of Colorado, Boulder), Bayarsaikhan Jamsranjav (National Museum of Mongolia) and Tumurbaatar Tuvshinjargal (Graduate School of Human Development in Landscapes)

[23]

Bronze Age Economic Transitions in Western Mongolia

Although the late Holocene saw tremendous changes in foodways across the eastern Eurasian steppe, poor preservation of organic and faunal remains make it challenging to trace important changes like the introduction of pastoralism during the Bronze Age and beyond. Here we present preliminary results from two archaeological field sites in western Mongolia with potential to answer important archaeological questions about this important period in Eurasian prehistory. The first site is a high-elevation ice field site which was apparently used as an Argali sheep hunting site during and after the Bronze Age. The site holds the remains of dozens, perhaps hundreds, of Argali sheep and other large game animals such as elk and ibex. Additionally, many artifacts of hunting gear have been recovered including “scare sticks,” wooden arrows, and bone and metal arrowheads, some still hafted to their arrowshaft. Excavations at a second site, a dry cave, have revealed a multi-millennial-year history of foodways in western Mongolia and appear to capture the transition from a mostly hunter-gatherer way of life to horse-mounted pastoralism. Findings from these two sites have incredible potential to broaden our understanding of horse domestication and the transition to nomadic pastoralism.

Hart, Sharlot (National Park Service)

[2]

Hornos, Adobe, and Hands-on Learning at Southern Arizona National Parks

The power of breaking bread together is well documented. Adobe, or earthen architecture, is an equally documented and important structural material. Combining the two, we get *hornos*, Spanish for earthen outdoor oven. While the term *horno* is not known by many visitors to National Parks, many K–12 students in urban and suburban Tucson, Arizona, are familiar through family use. Their architecture is often far more vernacular and utilitarian than pizza ovens in affluent neighborhood backyards. This talk features a K–12, nontraditional educational project at the Desert Research Learning Center in Tucson, modified from one taught at Cal State East Bay by Dr. Gonzalez. The approach humanizes past and present cultures. Through the simplicity of experimental design and construction of a scale model *horno*, K–12 students better understand classroom lessons regarding technology, social structures, and cultural identities. With its in-person modality, this outdoor activity has students’ hands too muddy to pick up phones, thus making it AI proof. Further, students can see themselves and their friends in this important STEM activity, bridging the divide between home and academic institution. Ultimately, the use of this culinary archaeology allows students to connect past and present cultures through experimental design and tangible handiwork.

Hart, Thomas (University of Texas, Austin) and Fisher Zban (Independent Scholar)

[213]

Preliminary Analysis of Archaeobotanical Remains Recovered from Late Classic Maya Marketplaces in Northwestern Belize

Archaeobotanical analysis of Late Classic Maya remains is a rapidly growing field of study. While much has been written about the different types of plants that the Maya used, very little is known about how and

where these plants were traded and their connection to regional integration and exchange networks. An analysis of the sediments collected from the 2023 Maya Marketplace Project revealed preserved macrobotanical and microbotanical remains from several sites. This presentation examines some of the preliminary results from these analyses and discusses the feasibility of using archaeobotanical remains to identify ancient marketplaces.

Hartenberger, Britt [169] see Richardson, Sarah

Hartley, Erika (Western Michigan University)

[65]

Discussant

Hartley, Erika (Western Michigan University) and Terrance Martin (Illinois State Museum)

[153]

Exploring Daily Lives through an Intrasite Comparison of Architectural Remains at Fort St. Joseph

Archaeological investigations spanning 25 years at the historic site of Fort St. Joseph (20BE23) have uncovered over 320,000 artifacts and several telling features, allowing us to learn more about the daily lives and identities of those who once occupied this eighteenth-century mission, garrison, and trading post in southwest Michigan. An analysis of the architectural remains has revealed the projected layout of four buildings at the site where fur traders and their families resided in addition to a possible domestic and workshop complex for the resident blacksmith. Middens and refuse deposits found in association with these buildings contain large quantities of animal remains and artifacts. Here we report on our preliminary investigation of these material remains in order to find similarities and differences among the occupants identifying as French, Native Americans, and métis and their families.

Hartley, Erika [41] see Manfred, Carson

Hartley, Erika [153] see Nassaney, Michael

Harvey, Amanda (California High Speed Rail), Heather Atherton (California High-Speed Rail Authority), Amy MacKinnon (California High-Speed Rail Authority) and Brett Rushing (California High-Speed Rail Authority)

[269]

Over a Decade of Design-Build Archaeology on the California High-Speed Rail, Construction Package 1 from Madera to Fresno, California

The California High-Speed Rail Authority (Authority) is responsible for planning, designing, building, and operation of the nation's first high-speed rail system. The high-speed rail system is being built through a series of design-build contracts. Construction Package 1 (CP-1) runs 32 miles from Avenue 19 in Madera County to East American Avenue in Fresno County. This long-term, compliance-based archaeological research consists of historical period discoveries, mitigation, and compliance through parts of rural San Joaquin Valley and downtown Fresno using a design-build approach. Initial Phase I inventories of the APE (totaling 1,651 acres) were completed in 2012 in two separate NRHP Section 106-compliant EIRs with associated MOAs, MMRPs, and ATPs under one Section 106 PA. Record search results identified eight eligible or potentially eligible, historical period archaeological resources within the APE and five within 0.25 miles of the APE. In the last 10+ years, 1,569 acres of APE have been added and surveyed, producing hundreds of isolated historical period artifacts. During construction, we have tested 36 newly identified sites; four are potentially eligible, and 32 sites were recommended as not eligible. Fifty-nine Banker's boxes of historical period artifacts have been analyzed and the Authority is collaborating with the City of Fresno on curation.

Harvey, Nick (Western Michigan University)**[197]***Scanning to Share: Investigating the Use of Photogrammetry for Public Outreach*

Archaeologists strive to improve the methods used to record and preserve the archaeological record for future research, interpretation, and outreach. The process of photogrammetry has improved their ability to curate and share archaeological evidence by using photos to create 3D images of excavation units, features, and artifacts. Using this technology, archaeologists and museum staff can capture the intricate details in a digital composition that can be displayed in exhibits, uploaded to websites, or simply stored in digital archives. Unfortunately, the resources needed for this process are not always available for smaller museums and repositories. To investigate the time and funding needed to employ photogrammetry on archaeological items, I will experiment with various scanning programs on artifacts recovered from the historic site of Fort St. Joseph located in present-day Niles, Michigan. Small finds from this site are typically displayed in exhibits and used in outreach programs, signifying the need to produce 3D images and printed items in order to increase the accessibility of these objects to the general public.

Harvey, William [158] see Torreggiani, Irene

Hasaki, Eleni (University of Arizona)**[282]***Energetics of Potters and Painters in the Athenian Industry of Decorated Ceramics (600–400 BC)*

Scholars have long debated the size of workforce in a niche industry of decorated ceramics in ancient Athens (600–400 BC) by using a variety of proxies mostly relying on the finished products themselves. In this paper I offer a bottom-up approach by calculating the time investment involved in potting and painting decorated wares. Far from a sprint race, the *chaîne opératoire* was an endurance endeavor with an eye to maintaining the health of the craft practitioners, minimizing their risks, and maximizing their profits through guaranteed sales. The energetics of ceramic artisans were fully embedded in their ceramic ecology for optimal collection of clay and fuel, drying time requirements, and animal hair collection for their slip brushes. Based on interviews and experimental sessions with practicing potters and painters, I estimated the energetics for producing three wheel-thrown vessels used in ancient symposia: a drinking cup (*kylix*), a storage vessel for wine (*amphora*), and a mixing bowl for wine (*crater*). These shapes vary considerably in size, curvatures, extent of decorated surfaces, and differentiation of technique and composition leading to insights on how different sectors of the Athenian ceramic industry invested their time and resources.

Hasan, Nomaan**[271]***Chair***Hasan, Nomaan****[271]***Mixing Times: Excavating Shared Pasts in Contemporary India*

As material forms become central to the ongoing formulation of history and national identity in contemporary India, archaeology is acquiring an increasingly prominent place in the popular imagination. Initially motivated by the current regime's interest in ascertaining the provenance of and recovering buildings allegedly usurped by Muslims, numerous organizations have emerged with the aim of providing archaeological education to the general public. This paper draws on ethnographic work with archaeological activists working to develop an appreciation of *sanjhi virasat* (shared inheritance), which is advanced as a national treasure to which both major religious communities (Hindus and Muslims) have contributed and is therefore meant to be nourished across religious divides. Through practices of archiving, publicizing, and memorializing, the activists attempt to put forward a composite history that counters ascendant majoritarian narratives. To understand their efforts, I bring archaeological writings on cultural mixture into conversation with archaeological

concerns on temporality. While prevailing scholarly work seems to account for mixture by pluralizing time and celebrating multi-temporality, the paper asks how multiple temporalities may coexist but in tension, premised on a denial of the other. What conceptual resources are available to archaeology to address such a conflict?

Hastorf, Christine (University of California, Berkeley)

[146]

Discussant

Hastorf, Christine (University of California, Berkeley), Maria Bruno (Dickinson College), Alejandra Domic (Pennsylvania State University) and José Capriles (Pennsylvania State University)

[217]

Early Social Life of Andean Tuber and Seed Domestication

The transition from hunting and gathering to agriculture initiated fundamental changes in the way people interacted with plant communities in areas beyond their places of origin. The South American Andes is one domestication center that provided two of the world's most important crops: potatoes and quinoa. The domestication processes of both *Solanum* spp. and *Chenopodium* spp. began in the Andean highlands, yet our knowledge of the processes of domestication and the commitment to agriculture lags behind other regions. Decades of research on the Taraco Peninsula in the southern Lake Titicaca basin have amassed a systematic set of archaeological data that spans the periods that saw dramatic climatic change as well as the shift to more sedentary, agricultural lifeways. Recently, we have been focusing on potatoes and chenopods, and their early evidence in the archaeological record, to gain a better sense of their domestication process in the Titicaca Basin once the inhabitants of the region began to settle as the climate became particularly amenable to agriculture, around 3000 BCE. Through archaeobotany we are tracking how the first settlers of the basin engaged with these future staples and how these actions interweave with the Andean ontology of landscape engagement.

Hastorf, Christine [217] see Chiou, Katherine

Hastorf, Christine [306] see Hu, Di

Hastorf, Christine [286] see McKenzie, Emily

Hatcher, Harold [303] see Dillian, Carolyn

Hattori, Marcia (Institute of Heritage Sciences, Spanish National Research Council)

[134]

A Latin American Choreography: Entanglements of Solidarity and Collaboration for a Forensic Archaeology

Latin America was and still is one of the most prominent areas for the development of forensic archaeology and anthropology. It is a common sense between researchers of the field that this Latin American perspective started with the Argentinian forensic team in the 1980s, and gradually new teams with more or less the same approach were created in different countries, unfortunately due to the context experienced throughout the twentieth century of dictatorships, internal conflicts, and generalized violence. This paper explores Latin American choreography in the weaving of an epistemology aimed directly at the communities affected by this violence. This Latin American know-how has implied, and still implies, ways of understanding violence in a scientific approach where communities are the center and subject-researchers-activists in the research. Focusing on the development of this field in some Latin American countries, I propose to identify this theoretical-methodological entanglement that has become involved in different countries with diverse and common histories that generates a Latin American identity of acting against violence and pursuing justice.

Hawkins, Alicia (University of Toronto Mississauga) and Heather Walder (University of Wisconsin, La Crosse)**[86]***Applying Glass Bead Chemistry to Examine Wendat Village Intrasite Organization*

Glass bead compositions and typologies from late sixteenth- and seventeenth-century Wendat villages in Ontario have been used to examine chronological differences and regional exchange networks; these artifacts may also be useful for investigating patterns of interaction and change within individual village contexts. Here, we test this hypothesis by examining spatial patterning within three Wendat village sites: Ball, Warminster, and Le Caron [Santimo]. At these sites, others have used historical evidence combined with archaeological data to identify areas of core occupation and later expansion, shifts in the village's boundaries over time, and individual longhouse structures. Robust radiocarbon chronologies aid in understanding these social patterns for the Ball and Warminster villages. This paper examines data from both polychrome and monochrome glass beads ($n = 117$ LA-ICP-MS samples) from these sites. It discusses patterns of glass bead chemistry in relation to current interpretations of intrasite spatial organization. This research demonstrates how glass bead compositions may be useful for exploring social differences and community organization across time and space within individual settlement locations.

Hawkins, Kayt (Kathryn) (University College London, Institute of Archaeology [ASE])**[115]***Food for Thought? The Use of Ceramic "Baby" Bottles in Roman Britain*

Since the mid-nineteenth century in Britain, a small collection of Roman spouted ceramic vessels have been assigned the functional description of "infant feeders" or "baby bottles," primarily through their recovery from infant and child burial contexts. Vessels of this type have been recorded from across the Roman Empire, yet in Britain they are relatively rare and have no comparable prehistoric predecessors. More recently, literary and bioarchaeological research has provided important information on maternal and infant health, breastfeeding and weaning patterns, and the potential role of these vessels in such care practices; roles that have been strengthened by residue analysis showing such vessels may have held dairy products. This paper draws on a recent survey of the "baby" bottles of Roman Britain and complementary program of Organic Residue Analysis to explore this phenomenon at a local level. Through combining material, scientific, contextual, and literary evidence, what can these vessels tell us about family life and maternal feeding choices in the context of a Roman province on the edge of the empire.

Hawkins, Rebecca (Algonquin Consultants Inc.)**[40]***Discussant***Hawkins, Rebecca (Algonquin Consultants Inc.) and Scott Willard (Miami Tribe of Oklahoma)****[101]***The Turpin Project: A Tribal Perspective*

The relationship between American Indian tribes and American archaeology—both its practice and its practitioners—has always been complicated and is still often fraught with a lack of consonance. Although the engagement of tribes as consulting parties in federally mandated (Section 106) projects has slowly increased over the last nearly half century, such consultative engagement (let alone participation) typically is less common and less robust when it comes to archaeological research projects. We discuss here how the Turpin Project has, by contrast, provided a unique opportunity for the Miami Tribe to engage with archaeological research. The importance of our relationship with the project results, in part, because some of our research interests overlap with the project's, given the Miamis' early historical presence in this late precontact site's vicinity. Still more important to the Tribe, however, is the opportunity the Turpin Project has provided for us to lay the groundwork for the reburial of remains exhumed from the site in the late nineteenth and mid-twentieth centuries. While such a focus might run directly counter to many archaeological research programs, the Turpin Project has itself focused on reconnecting descendant communities to the site and on furthering repatriation.

Hawkins, Rebecca [101] see Cook, Robert

Hawley, Kirsten (Indiana University), Claudia Johnson (Indiana University), Shelby Rader (Indiana University) and Charles Beeker (Indiana University)
[92]

ICP-MS Investigation of Geochemical Differences between Archaeological Ceramics from Terrestrial and Submerged Environments, La Altagracia Province, Dominican Republic

Geochemical studies of archaeological ceramics often assume little to no postdepositional change to the makeup of the artifact. This study uses ICP-MS trace element and lead (Pb) stable isotope analysis to investigate how a freshwater submerged depositional environment affects the geochemical signatures of archaeological ceramics. We test the null hypothesis that there is no measurable geochemical difference between ceramic assemblages from underwater cavern sites and assemblages from terrestrial sites in the same region (La Altagracia Province, Dominican Republic). Results indicate statistically significant ($p < 0.01$) variation between assemblages in the concentrations of 10 trace elements (V, Cu, Zn, As, Sr, Zr, Cs, Ta, Tl, U), leading to a rejection of the null hypothesis. Results also show a wider range of Pb isotope ratios in ceramics recovered from submerged sites than terrestrial sites, leading to further investigation of regional Pb isotope variation. These results suggest that ceramic artifacts recovered from underwater sites may be unsuitable for inclusion in comparative geochemical studies that assume the geochemical fingerprint of a ceramic artifact is a direct proxy for that of the original vessel. Results of this study will impact sampling design of future ceramic analyses and contribute to understandings of underwater archaeological site formation.

Haws, Jonathan (University of Louisville), Nuno Bicho (ICArEHB, University of Algarve), João Cascalheira (ICArEHB, University of Algarve), Mussa Raja (Universidade Eduardo Mondlane) and Milena Carvalho (ICArEHB, University of Algarve)
[225]

Archaeological Survey in the Lower Save River Valley, Southern Mozambique

Southern Mozambique, with extensive Quaternary-aged deposits, shows great potential to inform on early modern human behavior. Despite its geographic proximity to well-known southern African hotspots of Stone Age archaeology, the area represents a major gap in our knowledge due to civil war and political instability in the late twentieth century. In 2023, we began a systematic survey of the lower Save River valley in the southern half of Mozambique. This area had no previously documented sites, but we chose this valley because of the occurrence of exposed Quaternary gravel and sand deposits along drainages leading into the Save River. The initial reconnaissance survey in 2019 found that these deposits on the north side of the valley contained abundant raw material in the gravels and lithic scatters dated to the Middle and Later Stone Age. Testing at one locality, Zimuara I, confirmed the presence of stratified deposits in a ~2 m thick soil exposed in a quarry. Later Stone Age (LSA) were found in a buried contexts within the well-developed soil. An OSL age of 40 ± 3 ka provides the oldest dates for the LSA in Mozambique. Here, we report the preliminary results survey and test excavations of Zimuara.

Haws, Jonathan [126] see Bicho, Nuno
Haws, Jonathan [247] see Carvalho, Milena
Haws, Jonathan [126] see Ferar, Nolan
Haws, Jonathan [265] see Karrar, Osman

Hayashida, Frances [255] see Davenport, James

Hayes, Burchell [235] see Ralph, Jordan
Hayes, Burchell [235] see Wilson, Grant

Hayes, Leigh (Phaleron Bioarchaeological Project), Elizabeth Hannigan (Phaleron Bioarchaeological Project), Paige Schmitt (California State University, Chico), Paraskevi Tritsaroli (Wiener Laboratory for Archaeological Sciences) and Anna Karligkioti (Cyprus Institute)

[241]

A Bioarchaeological Analysis of Antemortem Postcranial Trauma Patterns within the Archaic Greek Cemetery of Phaleron

The Phaleron cemetery dates to the Greek Archaic period (700–480 BCE), a time of great political and social upheaval. Textual accounts from the Archaic period are limited, making bioarchaeological analysis integral to understanding the lived experiences of everyday ancient Athenians. This project focuses on antemortem postcranial trauma, examining patterns in quantity and location to better understand the activity and behavioral patterns of the individuals buried at the Phaleron cemetery. Intra-cemetery patterns of antemortem postcranial trauma and burial contexts are also analyzed. These analyses serve to identify potential social or economic differentiations within the cemetery.

Hayes, Terry [235] see Ralph, Jordan

Hayes, Terry [235] see Wilson, Grant

Haynes, Tanner, Tristan O'Donnell and Frank Schuler

[207]

Furthering 3D Digital Representation Methods: An Introduction to the Application of Neural Radiance Fields as an Alternative to Photogrammetric Modeling

Photogrammetry has seen increasing utilization within archaeology in recent years but with the rise of this representational methodology has come several challenges including the loss of context, inaccurate reproduction of surfaces, and difficulties processing thin objects. Emerging free open-source machine-learning technology can produce novel scenes known as neural radiance fields (NeRFs), which present a valuable alternative when creating 3D representations of objects, sites, and survey areas. While photogrammetry reproduces 3D geometry by matching features to create a polygonal mesh, the artificial intelligence powered NeRF software creates a continuous scene made of view-dependent radiating sources of light. This allows NeRFs to depict elements with unclear geometry, such as the sky and a more accurate representation of how light reflects off the subject from different angles; therefore, producing more lifelike facsimiles of the subject matter. NeRF utilizes the same data collection methods as photogrammetry, making it an accessible addition to the archaeologist's digital repertoire that can be employed not only on future endeavors but past ones as well. The research presented demonstrates the various facets of NeRF technology and how it can help us preserve, record, analyze, and educate within an archaeological context.

Hays, Christopher, Richard Weinstein (Coastal Environments Inc.), Steve Tomka (Raba Kistner Inc.) and Robert Tykot (University of South Florida)

[24]

Were the Fiber-Tempered Sherds from Claiborne (22Ha201) Made at the Site?

This presentation discusses the preliminary results of our study concerning fiber-tempered sherds from six loci in the Southeast in order to determine if any of the fiber-tempered pottery found at Claiborne, a Poverty Point culture site in coastal Mississippi, were made locally or imported. We analyzed such pottery and soil samples from the Wheeler Basin (Metzger site), south-central Louisiana (Ruth Canal site), the Savannah River (Stallings Island), the St. Johns River (Tick Island), the Apalachicola area in Florida, and Claiborne itself. We addressed this question using two techniques, petrographic thin sections and pXRF analysis, the results of which are discussed.

Hayward, Michele (Panamerican Consultants), Jonathan Hanna (Grenda Cultural Heritage), Michael Jessamy (Grenda Cultural Heritage), Donald Smith (Chronical Heritage) and Michael Cinquino (Chronicle Heritage)

[244]

Rock Art Distribution in the Windwards in the Caribbean: A GIS Locational Perspective

Rock art locations in the Caribbean are well known and include caves, waterways, coasts, inland rock formations, and ceremonial enclosures. Mythological (caves as centers of origin and fertility) and practical considerations (guardians of fresh water sources) have been offered as general explanations for their settings. GIS procedures offer an opportunity to explore in greater detail particular site locations, in addition to suggesting possible reasons for the observed site distributions. Our exploration of rock art settings in the Windward Islands involve comparing rock art distributions with petroglyphs and those with workstones (boulders with cupules and/or sharpening lines) to non-rock art distributions employing such environmental factors as distance from fresh water sources, elevation, and astronomic positioning, and such rock art attributes as element number and image types.

Hazard, Rebecca (Idaho State University, Engineering and Applied Science/CAMAS) and John Dudgeon (Idaho State University, CAMAS)

[173]

Microremains in Sediment as Indicators of Human Activity

Plant microfossil analysis has been utilized for environmental reconstruction at numerous archaeological sites around the world; however, the process of preparing and examining samples is labor intensive, requiring skill and a large investment of time in order to manually obtain sufficient count numbers. Furthermore, observations based on microfossil datasets are restricted in their scope by a reliance on a limited set of diagnostic morphotypes. The project presented in this poster explores a semi-automated method for analyzing microfossils extracted from archaeological samples. Additionally, in order to acquire a finer scale picture of localized ecological changes over time, we are performing a metagenomic assessment of ancient microbial taxa. Our objectives are (1) to develop a more economical method for microfossil analysis, and (2) to determine if patterns observed in microfossil datasets are reflected in corresponding microbial communities with the potential of providing additional insights into prehistoric human activities (e.g., colonization events, farming, etc.).

Hazard, Rebecca [35] see Dudgeon, John

Hazelwood, Lacy [69] see McDonald, Holli

He, Xiaoge (Peking University)

[19]

Social Structure Indicated by the Distribution of Bronze Resources in the Sanxingdui Culture (ca. 3200–3000 BP), Southwest China

Bronze was one the most precious resources for the Sanxingdui culture in southwest China, and the distribution of bronze resources reflected the social structure of Sanxingdui culture. This paper investigates the latest artifacts excavated from the eight burial pits at the Sanxingdui sacrificial site, and through cross-pit match of artifacts, classification of prototypes of artifacts, and observation of the relative location of the pits, the bronzes are divided into two groups, which means the bronzes originally had been displayed in two contemporary temples housing different activities. The type and number of bronzes owned by the temple that recorded the ruler's sacrificial activities far exceeded that of the temple recording the ruler's daily ritual activities, manifesting an extraordinary enthusiasm of Sanxingdui people for sacred rituals, and thus the social structure of Sanxingdui, in which divine power excelled over secular power, can be recovered.

He, Yahui (Stanford University)**[179]***Exploring Plant Exploitation and Food Practices in the Loess Plateau, China: A Comparative Microbotanical Analysis in Urban and Rural Settings during the Late Neolithic Period*

During the late Neolithic period in the Yellow River region (ca. 5000–4000 cal BP), a significant wave of urbanization unfolded, marked by the rapid development of settlement hierarchies, social stratification, and interregional interactions, which laid the foundation for the emergence of early state-level political structures. This period also witnessed the proliferation of sophisticated pottery types, notably vessels used for alcohol consumption and serving purposes, including pitchers and cups, in north China. However, the role of pottery assemblages, plant exploitation, and related food practices in mediating and shaping sociopolitical dynamics within both urban and rural contexts in the northern Loess Plateau region remains largely unexplored. This study presents a comparative microbotanical analysis of plants from elite and non-elite settlements and elite mortuary contexts, shedding light on the plant composition and food practices that shaped the social relationships, political structures, and urbanization processes in the region during the fifth millennium BP.

Headrick, Annabeth (University of Denver)**[273]***Teotihuacan, Chichen Itza, and a Cautionary Tale of Corporate Commerce*

Teotihuacan exhibits a broad trend of shared wealth, exhibited by numerous luxurious apartment compounds whose residents accessed considerable quantities of valuables, as reflected by portraiture of richly clad mid-elites and the mass production of costume elements. Chichen Itza similarly eschewed royal portraiture in favor of works portraying group assemblies of opulently adorned mid-elites. These characteristics inspire analyses focusing on whether these political capitals had individual rulers or corporate systems of governance, sparking comparisons of political structure across Mesoamerica. Less discussed are the potential costs of burgeoning members of society entitled to the trappings of wealth and status. This paper explores the economic implications of the mass consumption of exotic goods at Teotihuacan and Chichen Itza, including the vast trade networks, resource extraction, and labor necessary to create and move high value goods. Comparisons will be made to the seventeenth-century Dutch, a society with a proliferating middle class whose consumption was supported by global networks of extraction. While recognizing the evidence for increased access to wealth, this discussion will also explore the economic costs of the impulse to consume luxury goods, tempering the celebration of these societies as altruistic forms of governance.

Healan, Dan (Tulane University) and Blanca Paredes Gudino (Instituto Nacional de Antropología e Historia)**[214]***Ancient Tula and Its Interactions with Other Areas of Mesoamerica*

Over the course of time, archaeological investigations at Tula, Hidalgo, have recovered increasing evidence of systematic exchange with other areas of Mesoamerica spanning Tula's initial growth in the Epiclassic period and its Early Postclassic apogee. The material evidence at Tula itself includes finds from many parts of Mesoamerica, and in some cases includes luxury goods from ritual and other contexts associated with Tula's political and religious elite. Many other such items, however, including some of the most sensational recent finds, have been recovered from contexts associated with the everyday domestic realm, including a wide variety of residential structures throughout the ancient city, revealing a multitiered exchange system whose components include not only the movement of goods to and from Tula but their movement within the city itself. Stratigraphic and chronometric data indicate notable long distance exchange activity beginning in the Epiclassic that continued and flourished in the subsequent Early Postclassic period. Evidence from other sites provides some perspective on Tula's role as a donor in several cases.

Heaney, Christopher (Penn State), Bradymir Bravo Meza (Universidad Nacional Mayor de San Marcos), Frank Salomon (University of Wisconsin, Madison), Chris Stantis (University of Utah) and Tiffany Tung (Vanderbilt University)

[243]

Re-tying a Wayu: Connecting a Cranial Mask in the Smithsonian to Its Community of Origin in Huarochirí, Peru
To prehispanic Andeans in central Peru, donning a facial-bone mask, a *wayu*, reanimated the dead and honored ancestral victories. Following these masks' description in the ca. 1608 Quechua-language manuscript of Huarochirí, scholars presume Spanish priests destroyed them to extirpate the "idolatry" of ancestor worship. Our collaboration with one town in Huarochirí explores a possible *wayu* extracted by a North American collector in 1888 and held in the Smithsonian today. Conversations with municipal and communal representatives of that town have identified possible next steps, including (1) the identification and exploration of potential sites from which the *wayu* was extracted, to promote community identification with the Indigenous past and provide resources via tourism; (2) bioarchaeological research on the *wayu*'s pre-1608 identity and ritualization; and (3) the ethnohistorical recontextualization of its collection, in which community leaders are brought to the Smithsonian to research the mask's relationship to modern cultural and environmental heritage (e.g., masked dances and agricultural knowledge). We explore this process as a model for collaborative research across overlapping national ethics and legal imperatives. How might Andean ancestors dislocated by earlier anthropological collecting be reencountered by communities today, and what might archaeologists and other researchers do to help in that process?

Heath-Stout, Laura (Stanford Archaeology Center)

[124]

The Negative/Contested/Dark Heritage of Disability Institutions

When I told a leading Massachusetts disability activist that I was starting an archaeological heritage research project on the state institutions for people with intellectual disabilities, he flinched. "But those are sites of trauma and oppression, nothing empowering like 'heritage!'" he exclaimed. The three "schools," all listed on the National Register of Historic Places, were indeed eugenicist institutions where terrible conditions and abuse catalyzed lawsuits that led to the closure of two and the shrinking of the third. The two closed campuses now belong to municipal governments, and the crumbling buildings are increasingly covered with weeds and graffiti as debates rage about what kind of redevelopment would be appropriate. Disabled activists seek to make the histories of institutionalization more widely known, understood, and memorialized, while town governments seek profitable uses of the land and buildings, and many nondisabled residents downplay the horrors of the institutions or even regret the closure of large employers in their communities. In this paper, I will test the applicability of "negative heritage," "contested heritage," "dark heritage," and related theories to these cases, reflecting on the early stages of my project on disability history and heritage.

Hebert, Amelia (LSU)

[99]

Warrior, Priestess, Queen: Scythian Women and Their Roles

The Scythians were a group of people originating in Central Asia that migrated to what is now Ukraine and Southern Russia from the eighth to the seventh centuries BCE. They are well known for their nomadic way of life, horseback warfare, and apparent lack of a patriarchal society. There is significant evidence that Scythian women were treated as equals to Scythian men. I will use thorough research of archaeological sites and findings, scholarly articles, and relevant literature. I will show Scythian artifacts as well as artifacts from other societies depicting the Scythians. I found evidence of the roles of Scythian women through research of Scythian burial sites, art, weaponry, and clothing. There is also evidence spread throughout ancient Greek society—art, myths, writings of Greek historian Herodotus, etc. Though the "Scythians" may not be known by many people, the "Amazons" are. Though the depiction of Scythian women as Amazons began in ancient Greece, it continues today in modern media. The impact these women have had on women around the world for thousands of years is immense. I wish to shed more light on who these women were, and the important role they had in their society and ours.

Hechler, Ryan (Tulane University)**[220]***Discussant***[220]***Chair***Hechler, Ryan (Tulane University)****[220]***Monumental Manipulations: Varied Inka Colonial Tactics of Spiritual Embedment among Cara Ritual Centers of Northern Ecuador*

Tawantinsuyu's consolidation of northern Ecuador was characterized by unique moments of conquest, and reconquest, of the incredibly resistant Cara people. The principal Cara polities were the Cochasquí, Cayambe, Caranquí, Otavalo, and Quinche, each with monumental ritual centers, defined by massive earthen platform mounds. The Inka Empire was not only concerned with a physical subjugation of these centers, but also their spiritual conquest. The largest mound at Cochasquí was appropriated by the Inka and modified into a Cuzco-style structure. The Cara rebelled during Emperor Wayna Qhapaq's rise to power. The first Cara polity to fall during the Inka reconquest was Cochasquí, which, though allegedly burned by Tawantinsuyu, was reoccupied thereafter. The entire population of Quinche was deported and replaced with mitmaquna, ethnic enclaves relocated from within the empire. An Inka Temple of the Sun was established there in the middle of local mounds. Alternatively, the site of Inka-Caranquí was not placed among an important monumental site but was a ground-up Cuzco-style endeavor. The Inka tactics of spiritual embedment were varied and disruptive to local identities. Unfortunately, the realities of preservation and insufficient government intervention have resulted in much of the architectural evidence being destroyed at these sites.

Heckenberger, Michael [61] see Moraes, Bruno

Heckenberger, Michael [54] see Pinto Lima, Helena

Heckenberger, Michael [178] see Pugliese, Francisco

Heckman, Jasmine (US Fish and Wildlife Service)**[305]***Where Does the Responsibility Lie? The Long-Forgotten Federal Collections and the Repositories That House Them*

The federal government is responsible for a huge number of archaeological collections in the United States, and yet not all of these collections are housed in federally compliant repositories, while many collections are not even known to exist by the agency. But whose problem is this—the archaeological repository housing the collections or the agency? Many steps have been taken by agencies over the years to locate collections and house them in compliant repositories, but there is still so much work to be done if we are to be considered ethical stewards of these collections. The responsibility for these collections, including confirming the long-term steward of the collection, should fall on the federal agencies. This paper provides a snapshot of curation efforts for various agencies and suggestions on how agencies can work with archaeological repositories to identify and confirm collections under the long-term stewardship of the federal government. When federal agencies gain a more thorough understanding of their collections stewardship responsibilities, the agencies can ensure the proper care and management of the collections in repositories through sufficient funding streams, provide increased access to descendant communities and approved researchers, and fulfill the federal requirements stipulated in 36 CFR Part 79.

Hedlund, Brian [103] see De Cespedes, Manuel

Heffner, Sarah (US Army Corps of Engineers)**[4]***USACE and Section 106: Programs, Actions, and Authorities*

This presentation provides an overview of various United States Army Corps of Engineers (USACE) programs and authorities that require compliance with Section 106 of the National State Historic Preservation Act, such as the Regulatory Program, Section 408 Program, Civil Works Program, and Military Programs Installation Environmental Support Program. Here we provide examples of the activities regulated by each program, USACE expectations for cultural resources reporting and documentation, and how USACE coordinates with other federal agencies and federally recognized Indian tribes.

Heigel, Darren (University at Buffalo), Amanda Schmidt (University of Washington), Lucille Katzman-Tranah (University of Washington), Hollis Miller (SUNY Cortland) and Ben Fitzhugh (University of Washington)**[99]***Archaeology of the Past, Present, and Future: Insights from Youth Engagement in Old Harbor, Alaska*

This past summer, we traveled to Kodiak, Alaska to conduct archaeological fieldwork as part of the Old Harbor Archaeological History Project (OHAHP). This year, OHAHP partnered with Old Harbor community organizations to co-facilitate a cultural camp for local Indigenous youth. Serving as counselors, we aimed to expose Indigenous youth to archaeology by teaching them archaeological methodologies, while working with adult community members to create an enriching and fun cultural learning environment. As counselors, we were given the unique opportunity of learning and working with Alutiiq community presenters, who taught subsistence, dance, language, and arts. Thirty-five community members of varying ages joined us at our camp on Sitkalidak Island to participate. This poster will share our experiences from the cultural camp and discuss the importance of archaeologists' connections with community members. Specifically, our poster will discuss the importance of communication, interpersonal relationships, and flexibility as vital skills when engaging with communities in the context of archaeological outreach. We will also spotlight camp activities facilitated by Alutiiq community presenters, and their connections to the archaeological project. Ultimately, this poster will demonstrate how community-based work can support descendant populations and improve the quality of archaeological research.

Heilen, Michael (Statistical Research Inc.) and Shelby Manney (Arizona Army National Guard)**[173]***Living Data: A Digital Data Collection and Management System for Landscape Archaeology*

As more and more data are born digital, archaeologists increasingly focus on operationalizing and refining data models, workflows, and practices. Important considerations include not only whether data will be useable for their intended purpose but also whether data generated by archaeological projects will be findable, accessible, interoperable, and reusable for future research and management efforts. Additional concerns include whether and how primary data, paradata, and metadata are preserved, who controls them, and how they are governed. Studies have shown that the earliest stages of the data life cycle—i.e., how data are modeled and collected—strongly influence the outcome of later stages of the life cycle. As such, data collection methods should seek to maximize the suitability of data to fulfill all subsequent life cycle stages. This poster presents a cloud-based, digital data collection and management system developed for landscape surveys. We show how the data are modeled, collected, and stored; how the primary data can be visualized, analyzed, and integrated using semi-automated workflows; and discuss the implications of the approach to the interpretation and management of archaeological landscapes.

Hein, Anke [173] see Thomas, Dayna

Heinrich, Frits (Vrije Universiteit Brussel), Laura Motta (University of Michigan) and Annette Hansen (Vrije Universiteit Brussel)**[256]***New Frontiers in Ancient Diet and Nutrition: Developing Innovative Methods for Quantitative Compositional Analysis of Desiccated Archaeobotanical Remains*

This methodological paper presents on the development of new chemical methods to obtain functional, nutritional, and antinutritional compositional data from desiccated archaeobotanical specimens. It discusses the potential, pitfalls, possible applications, and significance of novel approaches to quantitatively assess the composition of ancient cereals and pulses in terms of a diverse array of macronutrients, micronutrients (e.g., vitamins, amino acids, and trace elements including “minerals” such as iron and zinc), functional compounds (e.g., gluten), and antinutrients (e.g., phytate). As a case study, it showcases the trace element/mineral results obtained from the archaeobotanical assemblage from the Greco-Roman village of Karanis in the Fayyum region of Egypt. The work presented is being carried out within the context of the Flemish Science Organisation funded project Rethinking Roman Nutrition and the Belgian federal Excellence of Science project AGROS (Agriculture, diet, and nutrition in Greco-Roman Egypt: Reassessing ancient sustenance, food processing and [mal]nutrition) and is executed by an international interdisciplinary consortium comprised of five universities and led by the Vrije Universiteit Brussel (VUB).

Heisinger, Bryan (US Forest Service, Pike National Forest, Colorado)**[332]***The Archaeology of Skiles Shelter (41VV165)*

Skiles Shelter (41VV165) is a small south-facing rockshelter near the mouth of Eagle Nest Canyon. While the site lacks the extensive organic preservation typical of dry rockshelters in the region, it is notable for its Pecos River style rock art, diversity of bedrock milling features, and prominent burned rock midden (BRM) accumulation. Excavations conducted in 2013 and 2014 by the Ancient Southwest Texas Project (ASWT), coupled with specialist analyses, have illuminated the site's long-standing use as an earth oven facility by hunter-gatherers in the Lower Pecos Canyonlands, as well as its punctuated inundations from historical flood events in the canyon.

Heitman, Carrie (University of Nebraska, Lincoln), Octavius Seowtewa (Zuni Cultural Resources Advisory Team), Curtis Quam (Zuni Cultural Resources Advisory Team), Gilbert Yuselew (Zuni Cultural Resources Advisory Team) and Michael Gchachu (Zuni Cultural Resources Advisory Team)**[269]***(Re)Connections through Time: Developing a Model for Multimodal Storytelling about Zuni Cultural Connections*

Native communities have long been excluded from the process of knowledge construction about their ancestral places. This exclusion has taken many forms: lack of voice or authority in museum excavations, curation, and exhibits; inaccessibility of collections that were removed from Native lands to geographically distant institutions or sold to collectors; the use of non-Native knowledge systems to classify and describe ancestral items; maps of ancient places that omit contemporary Tribal lands/Nations and Indigenous forms of mapping; and the use of anglicized place-names that obscure Native connections. In aggregate, these systematic exclusions alienate Native people from their own history and impoverish our national understandings of the past. In this poster, we describe a collaborative project between the Zuni Cultural Resources Advisory Team and the University of Nebraska, Lincoln, funded by the Andrew W. Mellon Foundation. Our work is focused on the physical process of reconnecting with ancestral collections and places and creating digital films that directly reach Zuni Pueblo community members. We hope this work will inspire the next generation of Native artists, museum curators, and cultural resource managers and provide a model for how we might confront the history of archaeological extraction and amplify enduring Indigenous histories of connection.

Heller, Cassidy (Coastal Carolina University) and Hannah Hoover (University of Michigan)
[266]

An Integrated Study of Late Archaic to Early Woodland Lithics and Ceramics of the Coastal Savannah River Valley

The Late Archaic (3000–1000 BCE) to Early Woodland (1000–500 BCE) transition of the South Atlantic Bight is characterized by vast sociotechnical changes. Research of these periods has been dominated in recent decades by the study of large shell rings and their likely attendant ceremonial happenings, in part because coastal erosion has necessitated mitigation. This poster will explore the Late Archaic and Early Woodland components of 38JA200, a large multicomponent site located in the Port Royal Sound of South Carolina. Through analysis of ceramic and lithic assemblages recovered during Phase I research, we explore how this landscape held host to a wide range of quotidian activities during a more than 1,000-year period. We also provide new data to refine local lithic and ceramic sequences in a context absent of shell rings.

Heller, Eric (University of Southern California) and Benjamin Bellorado (Arizona State Museum)
[14]

Striking a Balance: Ethical and Methodological Challenges in Virtual Reality Experience Design for Cultural Heritage Applications

Virtual reality is a valuable tool for public engagement and education, offering an immersive platform for the exploration of archaeological and cultural heritage landscapes. While not a gaming endeavor, cultural heritage VR draws from 3D gaming technologies and techniques to create the platform at the heart of immersive experiences. However, designing such experiences poses unique challenges due to the sensitive nature of the subject. Our project, Canyon Country Cultural Landscapes VR, aims to provide visitors to Bears Ears National Monument and its surroundings opportunities to delve into the region's rich cultural heritage and material culture. The project combines landscape-scale 3D environments with content from Indigenous communities, conservationists, land managers, and archaeologists to educate users about the history, fragility, and contemporary significance of these landscapes, all while emphasizing proper site visitation ethics. To achieve these goals, we must strike a balance between guiding users through the experience, conveying essential information in a nonlinear fashion and respecting the subject and descendant communities' cultural sensitivities. This presentation explores the challenges and solutions encountered during the project's development. It sheds light on the distinct considerations involved in creating collaborative cultural heritage VR applications, offering insights into the compromises and innovations shaping these efforts.

Heller, Nathanael (R. Christopher Goodwin & Associates)
[131]

Some Highlights from the Past Two Decades of Archaeological Research in New Orleans

It has been nearly 19 years since Hurricane Katrina nearly destroyed the city of New Orleans, and 14 years since the Deepwater Horizon oil spill created immeasurable damage to the Louisiana coastline. While one would be hard pressed to find much good that came from those events, recovery efforts in the aftermath of these disasters brought in billions of federal dollars to rebuild local infrastructure and restore the Louisiana coast. Cultural resources investigations performed to fulfill the requirements of Section 106 for these federal projects essentially have created a "golden age" for archaeological research within the New Orleans metro area. This paper will highlight some of the major projects that have occurred with the author's participation and important findings that have resulted from those investigations.

Heller, Nathanael [131] see Barbera, Aida

Helmer, Elliot (Washington State University)
[196]

Discussant

**Helmer, Elliot (Washington State University) and Andrew Frierson
[266]**

Geological Knowledge, CRM, and the Lithic Cultural Landscape of Eastern Oregon

From the impressive buttes and craters where it can be quarried to the shining black flakes speckled across vast sagebrush plains, obsidian and its procurement, use, and discard has defined the human experience of eastern Oregon's landscape since time immemorial. Cultural resource management (CRM) practitioners must be proactive about documenting the tangible and intangible elements of eastern Oregon's lithic cultural landscape. This preliminary research draws on published sourcing studies from both academic and "gray" literature to explore how obsidian is embedded within Indigenous social and spatial networks. Because it can be sourced to specific locations on the landscape, obsidian can bind together even distant sites and the people used them through their shared relationship to a particular place. We then consider the role of obsidian sources and associated lithic scatters in constructing an integrated cultural landscape and discuss potential challenges to managing and protecting them from potential impacts within the context of CRM.

Helmer, Matthew [189] see Boudreaux, Sarah

Helmer, Matthew [165] see Johnson, Erlend

**Helmke, Christophe (University of Copenhagen), Bruce Love (Independent Researcher) and Arlen Chase (University of Houston)
[251]**

The Scope and Contributions of the Hieroglyphic Corpus of Belize to Our Understanding of the Ancient Maya

The epigraphic corpus of Belize is often considered as being limited in scope, with few monuments and few contributions to the historical sources of the Classic Maya. Yet, discoveries in recent years have considerably changed this picture. Some of the more spectacular discoveries include (1) Altar 26 at Caracol (dated to AD 884); (2) the jadeite plaque at Nim li Punit (recording a statement of ownership and exalted pedigree); (3) the Komkom Vase at Baking Pot (the longest text on a vase); (4) panels of the hieroglyphic stair of K'an II of Caracol, at Xunantunich (supplying crucial information regarding the dynastic crises of the Kanu'l royal house); and (5) the glyphic panel of Tzunun (that likewise mentions the Kanu'l). However, there are also more mundane discoveries that help us to understand the structure of ancient Maya society, including textual material in residential burials and pseudoglyphic-texts on building facades. Here, we present an overview of the epigraphic corpus, considering its scope, nature, genres, longevity, and context. The historical information of the texts is also considered, in light of regionalism, connections, and references to other centers and polities, without which our understanding of ancient Maya history would be all the poorer.

Helmke, Christophe [230] see Echaui, Ileana

Helmke, Christophe [251] see Moyes, Holley

Helmke, Christophe [214] see Nielsen, Jesper

Helmke, Christophe [159] see Vepretskii, Sergei

**Hemsley, Samuel (Cornerstone Environmental) and Caitlin Stewart (Cornerstone Environmental)
[52]**

An Examination of the Virgin Pueblo within the Grand Canyon Parashant National Monument

The Virgin Anasazi Region of the southwestern United States of America is a relatively unrepresented region in archaeological literature. In the past, the undeveloped nature of the region combined with the region's remoteness have resulted in a dearth of unconsolidated literature on the archaeology of the region. Recent archaeological investigations by universities, government agencies, and environmental consulting firms have shed new light on the region. As the region is currently undergoing rapid development and population growth with predicted increases in site visitation, understanding the complexities of the region is vital to the preservation of the cultural resources in the area.

Henderson, A. Gwynn (Kentucky Archaeological Survey)**[64]***Moderator*

Henderson, A. Gwynn [272] see Pollack, David

Henderson, Breanna (Lochmueller Group)**[98]***Twelve Metrics for Creating Effective and Sustainable Public Archaeology*

Archaeology is the study, and by extension, the story of cultures, and everyone deserves access to their stories and those of their ancestors. The better one's understanding of archaeology, culture, and history, the better understanding of themselves and those around them. This research seeks to answer what approaches are needed to create sustainable and effective public archaeology programs. Due to the extreme importance of further efforts of inclusion, collaboration, and diversity within archaeology, this analysis quantifies multiple ways in which public archaeology can be achieved and showcase that it is possible to provide impactful programs for a variety of communities and audiences, no matter how lavish or economic one's budget may be. During this research, characteristics that successful outreach programs have in common were identified, and 12 metrics were created that can be used for analyzing outreach models. These metrics were designed after careful consideration of the current public archaeology models. These metrics are not meant to be rigid or to grade programs, but to highlight the methods used in successful outreach. Programs should be individualized to their audience and their needs. This work is meant to inspire more outreach efforts at any level.

Hendrickson, Mitch (University of Illinois, Chicago), Quan Hua (Australian Nuclear Science and Technology Organisation), Stéphanie Leroy (Centre National de la Recherche Scientifique, LAPA), Shuhui Cai (Chinese Academy of Sciences, Institute of Geology) and Emmanuelle Delque-Kolic (Centre National de la Recherche Scientifique, LMC I)**[289]***Why Stop Smelting Here? Using the History of a Slag Concentration to Understand Variability in Angkorian Iron Production Sites in the Phnom Dek Metallurgical Landscape, Cambodia*

The Phnom Dek metallurgical landscape represents the single largest iron smelting region in mainland Southeast Asia. Located 100 km east of Angkor in central Cambodia, our surveys have identified over 20 production sites and a total of 150 individual slag mounds active between the sixth and twentieth centuries. Iron smelting during the Angkor period (ninth to thirteenth century) experienced a massive increase in the number, size, and distribution of iron production locations and correlates directly with the expansionary phases of the Khmer Empire. Excavation at the Tonle Bak site, 2 km south of Phnom Dek, revealed the first evidence of Angkorian furnace bases within a 5 m high slag concentration and the repetitive smelting process used to generate the mound. Combining dates from in-slag and excavated charcoals, iron tools, and geomagnetic intensity analysis, this presentation establishes a timeline for one mound and uses this model to estimate production across the landscape. More importantly, we attempt to explain the variability in mound form and size within a given site through the lens of ritual practices, local spirits and ethnographic analogies from the Kuay, the traditional iron smelters in this region.

Hendrickson, Mitch [172] see Silverman, Danielle

Hendrickson, Mitch [56] see Stark, Miriam

Henebry-DeLeon, Lourdes (Central Washington University)**[143]***Discussant*

Heng, Piphai [56] see Stark, Miriam

Henry, Edward (Colorado State University), Casey Barrier (Bryn Mawr College), Robin Beck (University of Michigan) and Timothy Horsley (Horsley Archaeological Prospection)
[253]

Big Data and Possibilities for New Urban Comparisons at and around Cahokia Mounds, USA

Situated in present-day Collinsville, Illinois, Cahokia Mounds is considered globally as the premier example of precontact American Indian urbanism in North America. However, understandings of Cahokia's early population density, spatial arrangement, and scale are primarily drawn from relatively small areas within and surrounding the site's boundaries. As such, we know less about how Cahokia became an urban catalyst that influenced Mississippian lifeways throughout Eastern North America. Our project, The New Cahokia Atlas, is building on the work of Melvin Fowler and scholars over the last 30 years by examining the process of Cahokia's urban development from an unprecedented perspective. It includes a magnetometry survey that will record roughly 200 readings per square meter to visualize more than 5.5 km² of Cahokia's buried landscape, paired with geospatial analyses that allow us to work toward elucidating the urban growth of this UNESCO World Heritage Site. When complete, this will be the largest geophysical dataset in the Americas and among the largest in the world. In creating a dataset of this scale, we are attempting to noninvasively examine Cahokia in ways previously not accessible. Our project is also working with several Tribal Nations to ensure tribal access to, and input on, these data.

Henry, Edward [232] see Graham, Caroline

Henry, Edward [328] see Kitteringham, Lia

Hepp, Guy (California State University, San Bernardino)
[14]

Chair

Hepp, Guy (California State University, San Bernardino)
[14]

The Uprising: A Role-Playing Game as an Educational Aid in an Archaeology Seminar Course

In this paper, I discuss an analog role-playing game (RPG) entitled The Uprising, which I designed for an undergraduate university course on the archaeology of the senses. I reflect on how gaming in the classroom builds on recent pedagogical research and promotes participation not possible with traditional lectures alone. I summarize the gameplay and game design choices and elaborate on how the students and I have collaborated to improve the game during the two semesters of its use. I discuss how the RPG format combines student choice, chance, and information from the archaeological record to promote an engaging educational experience. I share student feedback, mention some fun and unanticipated outcomes of the game, and consider how the activity may evolve in future iterations. Finally, I provide some context about how the game fits with other assigned activities and materials and how broader elements of the course design, including the syllabus itself, may benefit from a degree of "gamification." I conclude that, though it incorporates elements of fiction and creative interpretations of the archaeological record, the RPG activity helps students relate to the ancient past in a unique way that befits an exploration of the archaeology of the senses.

Hepp, Guy [210] see Brzezinski, Jeffrey

Hepp, Guy [160] see Mitchell, Robert

Herckis, Lauren (Carnegie Mellon University)
[207]

Archaeological Exploration of Digital Spaces

Cultural processes extend into digital places and create archaeological sites that unfold in relationships

between physical assemblages and assemblages that are not physical. Archaeological sites like these require that we translate our methods and extend our theory to understand behavior in the contemporary world. A distinction between two types of archaeological sites can be made: Some digital places resemble 3D spaces, such as the constructed landscapes of many videogames. Other digital places have no apparent landscape, such as the “spaces” where collaborative work takes place, chat rooms, or discussion forums. Archaeology is uniquely positioned to make sense of human culture and to contextualize the use of these new kinds of places within larger social systems and long-term change. An archaeology of spaceless places is necessary to make sense of the relationships of power and trajectories of technological change in the recent past. This paper describes a case study in which behavioral chain analysis is used to analyze a digital assemblage and identify relationships of power and labor within a specific cultural context. An archaeology of digital environments will open new avenues for applied and collaborative archaeological inquiry.

Hermann, Manuel [302] see Monaghan, Lee Ann

Hermes, Bernard [251] see Reents-Budet, Dorie

Hermes, Taylor (University of Arkansas)
[23]

Afanasievo Settlement Archaeology in the Altai Republic

The Afanasievo culture in the Altai Mountains (ca. 3300–2800 BCE) has long captured our attention as the first pastoralists to spread to Inner Asia. Known almost exclusively through osteological remains and material culture from mortuary contexts, settlement data have remained scarce for characterizing the subsistence economy, access to domesticated horses, and interaction with Indigenous hunter-gatherer communities in the Altai region. Recent excavations by the Rise of the Altai Mountain Pastoralism Project (RAMPP) at Nizhnyaya Sooru located in the Altai Republic provide a rich record of Afanasievo domestic deposition, architectural remains, and occupational history, representing a well-preserved and high-use settlement. Utilizing a range of analytical approaches, including zooarchaeology, ZooMS, faunal stable isotope analysis, paleoethnobotany, human and animal paleogenomics, radiocarbon dating, and material culture analysis, the RAMPP team provides a close examination of Afanasievo daily life that has so far foiled understandings of how early pastoralists settled in the Altai and connected to new environments and social landscapes of local hunter-gatherers.

Hermes, Taylor (University of Arkansas)
[215]

Discussant

[215]

Chair

Hermesmeyer, Isabel (University of Michigan), Hung-Lin Chiu (National Tsing Hua University), Ying-Hsuan Kuo (National Tsing Hua University), Madeline Tribbett (Iowa State University) and Andrew Somerville (Iowa State University)

[201]

Stable Isotope Analysis Study of Dietary Change from the Qing Dynasty to Modern Day in Northwestern Taiwan

Taiwan has a unique cultural and dietary history within Asia. This is in large part due to the local indigenous Austronesian populations, recent mass migration and colonization from peoples across China, as well as colonial occupations by the Netherlands, Spain, and Japan over the last 400 years alone. However, this recent history and its impact on dietary culture in Taiwan today is not well documented. This study applies stable isotope analysis to a large sample of Taiwanese teeth (both enamel and dentin) samples from three distinct temporal periods that cover approximately 300 years: the Qing dynasty Taiwan (1683–1895 CE), Japanese occupation (1895–1945 CE), and into the early twenty-first century. In this poster we present new carbon,

oxygen, and nitrogen stable isotope data to reconstruct dietary and migration practices over these periods. These data are compared to historical sources, both secondary and primary, of recent dietary cultural history of Taiwan, as well as previous Taiwanese and Chinese studies utilizing stable isotope analyses from deeper archaeological time scales. These new data elucidate Taiwanese dietary trends over time, including aspects of gendered differences in food intake as well as cross cultural exchange.

Hernandez, Christine (Tulane University) and Gabrielle Vail (University of North Carolina, Chapel Hill)

[29]

Mythic Time ReCORDeD: Ropes, Sacrifice, and World Renewal in Late Postclassic Maya Murals

Ropes and cords in the form of twisted vegetal fibers, or entwined vegetation or serpent bodies, are a common component of Mesoamerican iconography from the Formative period (1500 BCE–250 CE) into the contact era. They serve a variety of functions such as measuring/framing devices, bindings for captives or animals, and portals or pathways connecting celestial and/or underworld locations. This presentation explores examples of cords from Late Postclassic (1250–1520 CE) murals and codices from the northern Maya region. A particular focus is on painted frescoes documented on the outer walls of Structure I from Santa Rita in Chetumal, Belize, which portray a series of figures connected by ropes that encircle their wrists. These deity and ancestral beings are situated in specific places within the ritual-mythic world that correspond to dates marking the completion of 360-day periods. Various interpretations of the rope iconography have been presented, which I suggest involves setting time in motion in conjunction with foundation rituals linked to establishing or birthing place. Following Amos Megged (2010:244), I explore the idea that cords represented in narrative scenes may have cued readers to what he calls “future memory” by connecting otherworldly events of the remote past with present and future reenactments.

Hernandez, Christopher (Loyola University Chicago) and Josue Gómez Vázquez (Centro de Investigaciones Antropológicas de Mesoamérica)

[230]

Evidence of Maya Metalworking from Mensabak, Chiapas, Mexico

Evidence of precolumbian Maya metallurgy is increasingly coming to light with numerous finds occurring in the Guatemalan highlands and the northern part of the Yucatán Peninsula. In this paper, we present new evidence of Maya metallurgy from the Mensabak region of Chiapas, Mexico, that dates to the Late Postclassic / early Spanish colonial period (AD 1200–1550). Our finds consist of copper-based prills, bell fragments, and casting sprues along with potential crucibles and bone tools for metal processing. Based on this evidence we argue for the existence of regionally specific metalworking techniques as well as artifact styles. Additionally, we highlight some of our initial experimental archaeology aimed at understanding past Maya metallurgy. In general, our findings in Chiapas allow us to begin to conceptualize metalworking as part of multifunctional places and develop a broader conception of the technological process along with its variations.

Hernández, Fiana [118] see Perla Barrera, Divina

Hernandez, Hector (Universidad Autónoma de Yucatán)

[83]

Chair

Hernandez, Hector (Universidad Autónoma de Yucatán), Victor Medina (Universidad Autónoma de Yucatán) and Guadalupe Camara (Universidad Autónoma de Yucatán)

[83]

Changes and Innovations in Yucatecan Beekeeping Production on Ranchos and Haciendas in the Early Twentieth Century

During the first part of the twentieth century, Yucatec ranchos and haciendas were spaces where various technological, economic, and landscape changes occurred derived from new beekeeping production strategies. The adoption and cultivation of *Apis mellifera* to produce greater quantities of honey and wax meant a cultural and material change among the descendant communities. One of the consequences was the reduction of the productive management of the native Mayan bee known as *melipona*. In this paper we will show how some of the changes linked to the use of ancient meliponaries and apiaries, present in different Yucatecan ranchos and haciendas, derived in different management strategies, the adoption of new species and innovations that sought to intensify the production of products derived from the hives. Archaeological evidence and various historical documents, related to the presence and use of spaces designated for beekeeping, suggest changes in the technologies implemented and the different strategies for bee production in places such as Rancho Hobonil, Santa Rosa, and Hacienda San Pedro Cholul. In most cases, these changes and innovations brought with them an increase in socioeconomic disparities and impacted different aspects related to the social memory and identities of the native communities of the Yucatán Peninsula.

Hernández, Valentina [119] see Power, Ximena

Hernández Bautista, Iris del Rocío [158] see Junco, Roberto

Hernandez Bellido, Daira [163] see Ortiz Brito, Alberto

Hernandez-Bolio, Gloria (CINVESTAV Unidad Merida), Patricia Quintana-Owen (CINVESTAV Unidad Mérida), Nadia Neff (University of New Mexico), Keith Prufer (University of New Mexico) and Vera Tiesler (Facultad de Ciencias Antropológicas, UADY)
[194]

Regional Food Paths of Ancient Tropical Agriculturists: A Multi-isotope Approach

Understanding dietary patterns in past societies is critical for interpreting economic and social transformations. The analysis of dietarily derived isotopes is a reliable source of categorical information about the types of foods consumed by an individual. Furthermore, multisystem-isotope analyses can clarify inferences about food sources and relative protein/carbohydrate contributions. We present dietary data from three Maya regions (Northern Lowlands, Central Lowlands, and Highlands) and one Mesoamerican descendant society (inhabitants of the Nicoya Peninsula, Costa Rica) during the Classic to early Postclassic periods using carbon ($\delta^{13}\text{C}$), nitrogen ($\delta^{15}\text{N}$), and sulfur ($\delta^{36}\text{S}$) stable isotopes from bone collagen with $\delta^{13}\text{C}$ and oxygen ($\delta^{18}\text{O}$) stable isotopes of dental bioapatite. We contextualize our results compared to reported isotopic data from over 1,000 individuals from Mesoamerica and the Caribbean. We discuss patterns based on behavioral choices (diet) and geology (probable food and water sources). In specific areas in the Maya Lowlands, C_3 plant-consuming animals were being eaten along with maize (C_4 plant)-consuming animals. This pattern varied regionally and temporally, with a marked increase in maize consumption toward the end of the Classic period and the beginning of the early Postclassic period.

Hernández Castillo, Daniel (University of Florida) and Gabriel Prieto (University of Florida)
[119]

The Use and Circulation of Seaweeds along the Western Coast of South America

The exploitation and consumption of seaweeds is a thriving matter of research, arguably started in the 1980s by the ethnographic work of Shozo Masuda in the Andes. This study goes beyond local discussions or milestones about proxies and dates and performs a large-scale follow-up on the available information on seaweed use and circulation along the Andean coast of the South Pacific Ocean. Trends can be clearly observed in five areas based on archaeological, ethnohistoric, and ethnographic data. The definition of these areas broadly corresponds to the biological availability of certain seaweed species and the environmental

conditions related to cultural areas. A constant pattern is the coastal exploitation and consumption and inland circulation of these resources; while the quantity of exploited species and uses given to them vary significantly between nutritional, agricultural, trading, and ritual purposes. An open discussion is the importance played by seaweeds in prehispanic societies along the Andean coast and their archaeological traceability if preservation is not optimal in certain contexts. These trends are discussed regarding modern phenomena, like aquaculture and recent reliance on algae for industrial and gastronomic purposes. A current diagnostic on seaweed uses is finally offered, leaving open questions about human reliance on marine ecosystems.

Hernandez-de-Lara, Odlanyer (Syracuse University), Logel Lorenzo Hernandez (Sociedad Espeleológica de Cuba), Esteban Grau (Fundación Antonio Núñez Jiménez de la Naturaleza y el Hombre) and Judith Rodríguez Reyes (Grupo Guamacaro, Sociedad Espeleológica de Cuba) [278]

An Archaeology of Dictatorship in Cuba: The Escuadrón 41 of the Rural Guard in Matanzas (1958)

The archaeology of dictatorships in Latin America has had a significant development in the last decades, especially focusing on the south and central continental experiences. However, there is a lack of attention to the dictatorial processes in the Caribbean from an archaeological perspective. Cuba is not the exception. After the military coup of March 1952 led by former president Fulgencio Batista, Cuba entered in a dictatorship that resulted in a bloody violence with extreme state repression which included imprisonment, forced exile, murder, disappearance of people, and the display of corpses in public spaces. By 1958 a former colonial fortress became a torture and detention center known as the Escuadrón 41 of the Rural Guard in the city of Matanzas. Its destruction after the Cuban Revolution, presents it as an atypical case study, illustrating a process of forgetting that contrasts with the national master narratives. Here, I present the preliminary results from the first archaeological project focusing on Batista's dictatorship. Integrating archaeological excavations, underwater surveys, testimonies, and archival research, I explore the destruction of the site after the Cuban Revolution, while contributing to the understanding of a traumatic past from new material referents.

Hernández Garavito, Carla (University of California, Santa Cruz) [208]

Discussant

Hernandez Godoy, Silvia Teresita [135] see Naegele, Kathrin

Hernández-Grajales, Meztli (Universitat de Barcelona), Luis Barba (Laboratorio de Prospección Arqueológica, IIA, UNAM), Juan José García-Granero Fos (HUMANE, IMF-CSIC) and Alessandra Pecci (ERAAUB, IAUB, Universitat de Barcelona) [194]

Multiproxy Approach to Identify Pottery Contents in Postclassic Xochimilco, Mexico: An Interdisciplinary Approach to Prehispanic Foodways

Mesoamerican food has been studied for years, and although much is known about many of the native practices and ingredients, the archaeological study of food in Mesoamerica is still developing and we are learning that we know far less of it than we thought. For this research, we applied a multiproxy approach that involved the use of GC-MS, starch grain analysis, FT-IR, and spot test to identify the residues of food preparation and consumption in ceramics from two Postclassic excavated areas in Xochimilco, Mexico. We focused on domestic non-ritual contexts. This research showed interesting data about ingredients and preparation techniques that we were not aware of or that might not be clearly referred to in historical sources. We also investigated the markers of nixtamalized maize. As part of the investigation, we were also able to obtain new perspectives on pottery use and form-function interpretation. This is one of the first studies to apply a multiproxy approach of

this type, and we were able to show the importance of using different methodologies to better understand the invisible residues of one of the most important activities of ancient people: food preparation and consumption.

Hernández Lara, Luis (UNAM)

[109]

Olmec Iron-Ore Mirrors from San Lorenzo, Veracruz / Los Espejos Olmecas de Mineral de Hierro de San Lorenzo, Veracruz

During the heyday of the Olmec capital of San Lorenzo (1400–1000 cal BC), iron-ore mirrors from nonlocal sources were traded from distant regions. The Central Valleys of Oaxaca have been hypothesized as one of the possible sources, if not the main one. Iron ore was then used by the Olmec to create drill components such as bearing blocks and as personal adornments with shiny, light-reflecting surfaces known as mirrors. Kent Flannery's proposal during the 1960s was that the Oaxacan site of San José Mogote was the polity in charge of mining the iron ore and manufacturing the mirrors. New evidence from excavations carried out by the San Lorenzo Tenochtitlán Archaeological Project from 1990 to 2013 and a thorough reanalysis of Flannery's data shows that this assumption may be an overestimation.

Hernández Sariñana, Daniela (Boston University), A. Gabriel Vicencio (Boston University) and Ryohei Takatsuchi (University of California, Riverside)

[248]

Understanding Food Production in Teotihuacan: New Approaches

Teotihuacan was one of the largest and most prominent ancient cities in Mesoamerica during the Classic period (150–600 CE). The city housed an estimated population of 100,000 people at its height, all in need of food, shelter, and basic necessities. Spaces dedicated to the production and consumption of foodstuffs in the city's different districts have been difficult to identify through excavation and remote sensing. New studies in different apartment compounds and the technologies available today might reveal valuable information about food production practices and subsistence strategies. This, in turn, allows us to start placing these practices in the living spaces to understand how they were inserted into the quotidian lives of the city's inhabitants. In this paper, we apply a variety of analyses (chemical residue, GIS, petrography, and spatial distribution) on ceramic and grinding stone tools to conceptualize food production in the ancient city of Teotihuacan, Mexico.

Hernández Sariñana, Daniela [218] see Carballo, David

Herndon, Kelsey (University of Alabama, Huntsville), Rob Griffin (University of Alabama, Huntsville), Brian Odom (NASA Marshall Space Flight Center), Dan Irwin (NASA Marshall Space Flight Center) and Tom Sever

[173]

NASA's Contributions to Remote Sensing in Archaeology

For more than four decades, NASA has played an outsized role in advancing the use of satellite imagery for archaeological applications. Starting in the 1980s, NASA archaeologist Dr. Tom Sever organized the first conference on archaeological applications of remote sensing, infusing NASA Earth Observations into cutting-edge archaeological research being conducted around the globe. Sever's interdisciplinary approach to archaeology influenced applications of remote sensing beyond the discipline, including the establishment of the UNESCO Maya Biosphere Reserve and the development of the flagship NASA-USAID SERVIR program. Today NASA continues to drive archaeological applications of remote sensing data through research solicitations and capacity building. Additionally, NASA's commitment to Open Science has contributed to the widespread availability of remotely sensed big data, a resource primed for uptake by the archaeological community to address automated identification of archaeological features through deep learning, fieldwork planning and practice, modeling of past environments and environmental variability, and cultural heritage impact and risk assessments. Feedback collected from this presentation will inform a needs assessment on the future of remote sensing in archaeology for this important community of practice.

Herold, Hajnalka (University of Exeter, UK)**[91]***Archaeology of Early Medieval Central and Eastern Europe in the Context of “Global Middle Ages”*

The intent behind the notion of “Global Middle Ages” has generally been to broaden the scope, especially geographically, that we examine when discussing the Middle Ages. An important component of this has been widening the field of view beyond western Europe and the Mediterranean. However, a broad territory, situated geographically in the very area between western Europe and the Mediterranean, has largely been left out of consideration, especially in English-speaking scholarship: we rarely see central and eastern Europe discussed in works that bear a “Global Middle Ages” tag. This paper argues that central and eastern Europe was strongly embedded in the medieval world and the study of the Middle Ages cannot be truly “global” without including this broad territory. One reason for the absence of this region, especially for the earlier part of 500–1500 CE, could be the lack of consistent written sources in most of this area before the eleventh–twelfth centuries. This is where archaeology can play a decisive part—the archaeological record is rich and detailed, albeit less well known in an international context.

Herr, Sarah (Desert Archaeology Inc.)**[238]***Discussant***Herrera, Marta (Profesora titular jubilada) and Juan Camilo Niño (Universidad de los Andes)****[220]***El Maya de los Sindagua y el Awá-Pitt contemporáneo*

En la literatura sobre los Sindagua producida en los siglos XX y XXI es un lugar común hablar sobre su exterminio a principios del siglo XVII. Sin embargo, es difícil sustentar esta aproximación al analizar las cifras que figuran en visitas y cuentas de tributarios de la provincia de Barbaocoas de los siglos XVII y XVIII. En efecto, en esos documentos que, en general, señalan la “nación” a la que pertenecían los indígenas, los clasificados como Sindaguas aparecen como mayoritarios al menos hasta 1720. Una situación igual de diciente se observa hoy en día. Tal y como pudimos constatar personalmente, los actuales Awá, hablantes de la lengua awa pitt reconocen una enorme proporción de los nombres Sindaguas registrados en un documento del siglo XVII. El documento, parte de un proceso judicial que se adelantó contra los Sindagua en 1635, cuando fueron derrotados, indica que su idioma era el Maya, sin dar más explicaciones. La familiaridad de los Awá con el Maya de los Sindagua registrado en los documentos habla de continuidades y discontinuidades que serán las que discutiremos en esta presentación.

Herrera, Roberto (City University of New York [CUNY])**[157]***Chair***Herrera, Roberto (City University of New York [CUNY]) and Francisco Corrales-Ulloa (National Museum of Costa Rica)****[157]***Diversity in Southern Central America: Exploring Late Aguas Buenas / Early Chiriqui Period Sites in the Diquís Subregion*

Southern Central American archaeology is a rich tapestry of variation that makes the task of discerning distinctions and commonalities a difficult one, hindered by a lack of systematic research, particularly in southern Costa Rica. This study offers initial findings from recent fieldwork conducted at two contemporaneous Aguas Buenas period (300 BC–AD 800) sites, Cantarero and Pejeperro. By examining these sites, we aim to shed light on both interregional and intraregional interactions delving into how material consumption and local resource utilization align or deviate from each site’s social functions. We also contrast the findings with interpretations from two contemporaneous sites, El Cholo and Bolas, examining their compatibility with existing models for vertical and horizontal social dynamics.

Herrera Herrera, Antonio [119] see Simões, Carlos

Herrera-Parra, Esteban (Brown University), Melanie Pugliese (University of Toronto) and Shanti Morell-Hart (Brown University)
[256]

Traditional Dishes and Culinary Improvisations: Elite Gastronomy in the Maya Area

Over the past few decades, understandings of cuisine in the Maya area have been radically amplified with the use of new techniques. Some methods offer the opportunity to directly connect artifacts and features with actual plant food residues. The ability to recover microscopic residues of food from sediments, artifacts, and human teeth has revealed not only a broad list of ingredients but a wide array of practices and recipes. Here, we draw on our previous paleoethnobotanical research across the Maya Lowlands to develop an understanding of Classic period cuisines, integrating new evidence from the Southern Lowlands. We consider the emergence of elite foodways, and how elite gastronomic practices factored into broader political maneuvers and private performances. We also tentatively suggest a taxonomy of local traditions that did not conform to a strict elite “grammar.” By addressing commonalities and departures from a core and canonic elite cuisine, we highlight how local elite expressions reified culinary norms but also manifested fluidity and flexibility in culinary practice. Paralleling work with other types of elite assemblages, we illuminate how privileged actors drew on broader cultural logics to make their cuisines intelligible, yet also locally improvised in significant ways.

Herrera Wassilowsky, Alexander
[242]

Chair

Herrera Wassilowsky, Alexander
[242]

Water Technology and Symbolism in the Andes (Cordillera Blanca, Ancash, Peru)

Dominated by the glaciated mountain couple Huascarán (male, 6,768 m) and Tullparaju (female, 6,395 m), the cultural landscape of the Callejón de Huaylas has long been shaped by stark contrasts in water availability. This paper showcases how water infiltration and surface runoff catchment technologies developed, as techné and as logos. Drawing on survey and excavation data from the environs of Tullparaju, it argues that glaciers became increasingly key for gravity irrigation farming under irregular climatic conditions marking the End-Formative (EF, ca. 2400–1800 BP) and late Middle Horizon (1200–1000 BP) and suggests the rise of paramount ceremonial centers as associated with the development of major inter-catchment water transfer systems. The complementary male/female opposition in the present landscape is discussed in the light of rock art at the pacarina of Keushu and suggested to reflect a precolonial moiety division. The interplay of anthropic lakes, bofedal wetlands, and glacier-fed gravity irrigation in ritual and mortuary practices is sketched out and contrasted with the violent decoupling of the technical and symbolic aspects of water management during the early colonial period. Present mismanagement of water surplus triggered by ongoing glacier retreat is seen rooted in this process.

Herrick, Hannah [55] see Minor, Elizabeth

Herring, Catherine [202] see Hollenbach, Kandace

Herrmann, Corey (Yale University)
[161]

El Torno del Cielo: A New Spin on Regional Interactions from the Río Grande de Chone, Manabí

Precolumbian societies of the Ecuadorian coast have long attracted the interest of archaeologists studying

regional interactions, since the evocative Sámano-Xerez (1844 [1528]) chronicle of encounters between Spanish conquistadors and Manteño trading vessels. The deep histories of these regional social interactions remain avid topics of research (Beekman and McEwan 2022). Contributing to these and other discussions, the Proyecto Arqueológico Río Grande de Chone has worked in the largest tributary of the Río Chone, positioned in the heart of Manabí's coastal cordillera. Excavations at the sites of La Narusa and Platanales and regional survey demonstrate the Río Grande was occupied since at least the mid-third millennium BC. Settlements of the Late Valdivia and Chorrera cultural traditions provide new information regarding local and regional connections these communities maintained. Changes in ceramic production and highland sources utilized for obsidian demonstrate far-flung material exchange and vibrant sociopolitical relationships. Additionally, the PARGC's encounter with a small second-millennium BC shrine provides a prescient example of early religious architecture. With elements recalling the spiral architecture of their Amazonian contemporaries and the stepped platforms of their coastal Peruvian neighbors, this shrine's construction by past residents of Platanales suggests their spiritual and social universe extended far beyond the coastal cordillera.

Herrmann, Corey (Yale University)

[220]

Discussant

Hertfelder, Paula (Binghamton University)

[75]

A Spatial Analysis of Excavated Mortuary Features from La Playa, Sonora, Mexico (SON F:10:3)

Covering an area of nearly 10 km², La Playa (SON F:10:3) is one of the most important archaeological sites in northwest Mexico. Significantly, La Playa has one of the most extensive Early Agricultural period deposits in the US Southwest/Northwest Mexico. It is also being impacted by severe sheet erosion that forms arroyos and impacts many of the archaeological features at the site. Long-term research at La Playa began with the Proyecto La Playa in the late 1990s. Since then, the Proyecto La Playa has conducted annual excavations and surveys at the site. Much of this research has focused on excavating mortuary features—primarily inhumations—that are at risk of erosion. Interestingly, there is no apparent cemetery space for these features, which are widely distributed. For this paper, I complete a spatial analysis of these mortuary features from the digitized feature sketch maps. I examine whether there are spatial patterns related to sex, burial orientation, number of individuals, and age. I also look for any associated correlations within the site sub-areas or landform. For this presentation I do not show any images of human remains, either photographed or hand-drawn.

Hess, Erin

[4]

Chair

Hess, Erin

[4]

Jewel of the Sierra: An Interdisciplinary Approach to Understanding Lake Tahoe's Underwater Historical Context and the Development of a Sensitivity Model for Cultural Resource Identification

The US Army Corps of Engineers' (Corps) Regulatory Program regulates work and structures within Lake Tahoe, a navigable water of the United States, under the Rivers and Harbors Act of 1899. The recent lifting of a local building moratorium has resulted in a resurgence of private, commercial, and public development around the lake margin. The resulting sudden increase in Regulatory permit applications prompted the Corps to develop a sensitivity model for identifying underwater cultural resources to guide compliance with Section 106 of the National Historic Preservation Act at Lake Tahoe for the Corps' Regulatory Program. Using geologic and remote sensing data, combined with tribal consultation, ethnographic information, previous

underwater archaeological investigations, and historical records, the Corps has developed a historical context for the underwater environment at Lake Tahoe, which in turn facilitated the creation of a sensitivity model to guide cultural resource identification efforts for undertakings regulated by the Corps. This session provides a summary of Lake Tahoe's historic context and presents the underwater cultural resource sensitivity model. The model will continue to be refined as cultural resource identification efforts for individual undertakings proceed.

Hewlett, Barry [190] see Zimmermann, Mario

Hicks, Megan (City University of New York)

[234]

Discussant

Higgins, Howard (TRC Environmental Corp.)

[150]

Discussant

Higgins, Sherry [104] see Hanson, Tegan

Higgins, Sabrina [264] see O'Neil, Holly

Hildebrand, John [92] see Morris, Margaret

Hill, Chad [139] see Rowan, Yorke

Hill, David (APAC) and Jan Patrik (Masaryk University)

[255]

Compositional Analysis of Ceramics from the Medieval Port of Madayi, Kerala, India

Beginning around the eighth century the volume and scale of exchange between the societies around the Indian Ocean and southeast Asia increased substantially. Archaeological work at the trade port community of Madayi, in the Kerala State, southwest India provides evidence of the integration of this south Indian community into the contemporary global economy. The small size and erosion of the surface of sherds has removed some of the painted and glazed decoration making identification through physical observation alone difficult. Typological, petrographic, and LA-ICP-MS analysis of glazed and earthenware recovered during the project has identified locally produced ceramics while other pottery sherds originated in southern Mesopotamia, China, and southeast Asia.

Hill, Erica (University of Alaska Southeast)

[333]

Curated Objects in Relational Networks of the Western Arctic

Nineteenth-century Inuit and Yupiit living on the coasts and islands of the North Pacific inhabited a landscape populated by spirits, animal persons, and object-beings. Human observance of rules and rituals was necessary, but not sufficient, to regulate this fluid, animated ecosystem. Magical practices, deeply embedded in relational ontologies, enabled humans to navigate this complex more-than-human world, materializing and reproducing

social networks that made life possible. This paper investigates the material evidence of magical practices in northern Alaska and the islands of the Bering Sea, exploring how humans employed curated objects such as beads, special stones, and animal parts to communicate, protect, and facilitate exchange—actions necessary to daily survival. Ethnographic data from the nineteenth-century contact period informs interpretation of earlier Thule-era material culture recovered archaeologically.

Hill, Mark (Ball State University)

[24]

It's Complicated: Additional Insight into the Source(s) for Poverty Point Copper

As the largest and most complex archaic period earthwork site in Eastern North America, and the center of an extensive exchange network covering a wide region of eastern and central North America, Poverty Point has been the subject of considerable research efforts. Among this body of research, Hill and colleagues (2016) used laser ablation–inductively coupled plasma–mass spectrometry to examine the elemental composition of six copper artifacts from Poverty Point, and compare that to the composition of known sources in the Appalachians and Great Lakes. The results suggested an Appalachian source, contrary to previous assumptions that positioned Lake Superior as the expected source of Poverty Point copper. Encouraged by these results, an additional nine Poverty Point copper artifacts were analyzed using the same methods, and this analysis is reported here. Unlike the previous analysis, eight of these nine copper artifacts exhibited compositional profiles consistent with sources in the Lake Superior basin, while only one showed similarities to Appalachian sources. This new analysis adds detail to the complex interactions that structured the Poverty Point exchange system.

Hill, Matthew [35] see Knell, Edward

Hill, Rebecca (Tulane University) and William Ringle (Davidson College)

[261]

Structuring Liminality: Terminal Classic C-shaped Structures in the Puuc Region

This paper discusses excavations between 2006 and 2008 in the Grupo Chanchich at Huntichmul, Yucatán. Huntichmul is one of the larger sites in the eastern Puuc, with a strong Terminal Classic apogee. The Grupo Chanchich is of interest because it is a formal arrangement of C-shaped structures nestled in the center of the civic-ceremonial architectural zone of Huntichmul, adjacent to an Early Puuc Civic Complex. A review of the location, layout, features, and artifact and ecofact assemblage of the Grupo Chanchich, in the context of a comparative analysis of previously recorded Puuc C-shaped structures, provides the basis for a typology of C-shaped structures. Subsequent lidar and ground survey in the eastern Puuc has resulted in the identification of several groups very similar to the Grupo Chanchich. Their shared formal architectural grammar suggests a level of complexity and regional integration amid the breakdown of Classic Maya sociopolitical institutions. This paper also considers the functional significance of C-shaped Structure Groups and discusses our interpretation of these groups as potential marketplaces.

Hills, Kendall (University of Illinois, Chicago CRIM), Calen Kestle (University of Illinois, Chicago CRIM), William Feltz (University of Illinois, Chicago CRIM), Ivan Cultura (National Museum of the Philippines) and Gregg Abbang (National Museum of the Philippines)

[105]

Recovery Efforts at a Second World War Aircraft Crash Site on the Island of Luzon, Republic of the Philippines

The Defense POW/MIA Accounting Agency's (DPAA) mission is to provide the fullest possible accounting of missing service members from past conflicts. More than 81,000 service members remain missing, and almost 50% of those losses are attributed to America's efforts during the Second World War in the Indo-Pacific region. Through close partnership with the DPAA and the National Museum of the Philippines, the Center for Recovery and Identification of the Missing (CRIM) at the University of Illinois, Chicago executes missions

throughout the Philippines to aid in the recovery of this large portion of missing service members. This poster illustrates CRIM's recovery process at a Second World War aircraft crash site in a remote location on the Island of Luzon in the Philippines. We illustrate how the project has evolved from historical research and site location to large-scale excavation and digital landscape modeling. Due to the difficult nature of the site, the CRIM team draws on an arsenal of archaeological methods in the endeavor to provide a full accounting of the II service members who remain missing from this air loss.

Hillyard, Emily [179] see Levin, Maureece

Hinojosa-Garro, Demián [31] see Flores-Colin, Alberto

Hiquet, Julien [61] see Mereuze, Remi

Hirniak, Jayde [308] see Gravel-Miguel, Claudine

Hirniak, Jayde [282] see Malone, Alex

Hirshman, Amy (West Virginia University) and Matthew Valenti [255]

Baked In: Remnant Production Gestures from Potters in the Tarascan State

We examine the traces of production gestures that ceramics producers left behind on the surface of 100 sherds excavated at Urichu, a minor administrative center for the Tarascan (P'urépecha) state (1350–1524 CE), in the Lake Pátzcuaro Basin, Michoacán, México. These sherds represent the Early and Late Postclassic time periods at the site, approximately 625 years (AD 900–1000/1100–1525). Direct information on the potters' production gestures during the manufacture of ceramic vessels, following the methodology Valentine Roux, enables us to identify production techniques and evaluate how those might have changed over time. The sherds were visually inspected using a 10× pocket loupe, a 10× magnifying table lamp, and a Dino-Lite Edge microscope. Predominant gestures indicated hand-building, rather than mold or rotational modeling. We conclude that the dominant productive techniques used by these potters remained relatively stable through time, even though the potters experienced significant social and economic changes during the emergence of a state.

Hirth, Kenneth (Penn State University)

[214]

Discussant

Hirth, Kenneth [128] see VanDerwarker, Amber

Hitchcock, Robert (University of New Mexico) and Melinda Kelly (Kalahari Peoples Fund) [190]

The Archaeology and Anthropology of Megafauna Exploitation in the Kalahari Desert of Southern Africa

Southern Africa has some of the world's largest elephant (*Loxodonta africana*) populations. Botswana, Namibia, and Zimbabwe all allow elephant hunting by safari company clients. Wildlife departments in the three countries engage in problem animal control (PAC) to reduce human-elephant conflict (HEC). Local indigenous community members, while not allowed to engage in elephant hunting themselves, receive some benefits in the form of meat from elephants that are killed by safari company clients. Historically, San groups such as the Tshwa of Botswana and Zimbabwe were renowned elephant hunters and trackers. This paper will

examine trends in elephant hunting that have occurred over time in Botswana, Namibia, and Zimbabwe. Particular attention will be paid to the hunting technology employed in this megafaunal exploitation. The archaeological and anthropological implications of these activities are addressed.

Ho, Joyce Wing In (Harvard University), Ryan Kennedy (Indiana University, Bloomington), Christina Warinner (Harvard University) and Kristine Richter (Harvard University)
[199]

Identifying Parrots, Songbirds, and Toucans with New Zooarchaeology by Mass Spectrometry (ZooMS) Markers
Archaeological and historical evidence has demonstrated the sociopolitical, economic, and ritual significance of parrots, songbirds, and toucans in precontact Americas. In Mesoamerica, these birds, along with their plumages and their capabilities to sing and mimic sounds, were highly valued. However, taxonomic identification of avian fauna can be challenging with traditional zooarchaeological methods, especially of non-subsistence species. While development of zooarchaeology by mass spectrometry (ZooMS) enabled accessible taxonomic identification of morphologically similar species and fragmentary remains for mammals and fish, biomarkers for birds, particularly non-subsistence species, remain underdeveloped. We conducted ZooMS analysis on modern reference specimens of parrots, songbirds, and toucans from the Americas, successfully identifying potential biomarkers at order, suborder, family, and subfamily levels. We then use these markers and existing data from several archaeological sites to determine if low abundance avian species represent birds potentially exploited for plumage or song. Our novel ZooMS markers demonstrate how underrepresented American avian taxa can be identified and enable further explorations of nuanced research questions on non-subsistence birds in past societies.

Ho, Percy Hei Chun (Harvard University), Kristine Richter (Harvard University), Ryan Kennedy (Indiana University, Bloomington) and Christina Warinner (Harvard University)
[199]

Distinguishing Cervids and Bovids in the Americas Using Zooarchaeology by Mass Spectrometry (ZooMS): Authentication and Development of New Peptide Markers

The Cervidae family has long been central to societies throughout history, whether as venison meat or raw materials, as gifts from long-distance trades, and as trophies in ceremonial acts. However, species-level cervid exploitation and management remain underexplored due to identification difficulties from other sympatric cervids and bovids. Prior research has also focused on Eurasian species instead of the American taxa. To address such challenges, we generated new zooarchaeology by mass spectrometry (ZooMS) peptide markers for six cervid and two bovid species. We present novel biomarkers for one cervid (*Cervus canadensis*) and two bovid species (*Ovis canadensis* and *Antilocapra americana*) from the Americas, and we demonstrate the presence of four new marker regions. Taking both peptide markers and geographical ranges in conjunction, all cervid species can be identified to the species level and are distinguishable from sympatric bovid species. We also identify three distinct patterns in white-tailed deer (*Odocoileus virginianus*) spectra, which we suggest as being representative of white-tailed deer, mislabeled mule/black-tailed deer (*Odocoileus hemionus*), and hybridized deer, respectively. Pending confirmation of peptide sequence variations using liquid chromatography with tandem mass spectrometry (LC-MS/MS), our results reveal that ZooMS enables species-level distinctions in cervids and bovids of the Americas.

Hoag, Elizabeth (Cleveland Institute of Art)
[129]
Chair

Hoag, Elizabeth (Cleveland Institute of Art)
[129]

Resilience and Empowerment: 100 Years of Archaeological Mothers in the Field

While much has been written recently highlighting pioneering women's contributions to archaeology, there

has not been a systematic study of their roles as mothers and how they navigated their personal lives in a male-dominated field. In this paper I contextualize the role of motherhood in archaeology from an historical perspective, highlighting documents and biographical accounts of British and American women archaeologists from the late nineteenth through the mid-twentieth centuries. Through a close read of dozens of biographies, autobiographies, and memoirs, I explore how women and mothers wrote about and navigated the intersections of their personal and private lives, and how mothering affected their professional work. These mothering accounts are viewed through a matricentric feminist theoretical lens that seeks to contest, challenge, and counter the patriarchal oppressive institution of motherhood and seeks to imagine and implement a maternal identity and practice that is empowering to mothers (after Andrea O-Reilly). These important, overlooked historical accounts from the field serve as a context for current experiences of motherhood and archaeology and can help normalize motherhood in an empowering, meaningful way that can push the field to be more inclusive and supportive of the needs of mothers and parents.

Hobbs, Maryann [272] see Baustian, Kathryn

Hockett, Bryan [61] see Shelley, Nathan

Hodapp, Magen (Northern Arizona University) and Chrissina Burke (Northern Arizona University)

[89]

Reevaluating Bone Artifact Collections and Their Histories at the Museum of Northern Arizona

Animal bones and the artifacts manufactured from them have long existed in conflicting archaeological and museum classification systems. Curating institutions once classified them as non-artifactual, or as ecofacts, and only in more recent years have worked animal bones been categorized as artifacts. Regardless of these inconsistencies, many bone artifact assemblages from the American Southwest have been analyzed, although not in earnest, creating inaccurate databases. By reanalyzing bone artifacts from several sites across the Arizona Colorado Plateau and by using comparative collections and braiding methodologies, gaps in their care and identification emerge. From incorrect species identification to poor refitting and lacquering techniques, developing an improved profile of archaeological bone artifacts helps emphasize their significance to Indigenous cultures, update museum databases, and support decolonizing practices by prioritizing the use of collections rather than active excavation. Here, we present several case studies using faunal assemblages from five sites curated at the Museum of Northern Arizona demonstrating the knowledge that can be gained from more descriptive analyses respective of their curatorial histories.

Hodapp, Magen [9] see Gillaspie, Amy

Hodge, Christina (Haffenreffer Museum of Anthropology, Brown University)

[305]

Collections-Based Pedagogy: Where Pasts Meet Futures

There has been a recognized teaching crisis in archaeology for at least 25 years—almost as long as there has been a “curation crisis.” In this reflection, I focus on collections-based university teaching in American archaeology. As in the popular archaeological imaginary, archaeological instruction has long emphasized fieldwork over work with existing collections. How have existing archaeological assemblages been used to teach archaeological thinking, create new knowledge, or convey values of our field? Why haven’t they been/aren’t they used more? What are the pragmatic and ethical implications of pedagogy with collections? This paper considers the past, present, and future of these questions via practitioners’ reflexive critiques of collections-based teaching from the past 25(ish) years. These debates are situated with reference to object-based pedagogy in the fields of museum studies (both critical and operational) and educational theory (especially related to research-based and service-based learning). The university classroom is an articulation

point for archaeology as social practice, a setting where university-educated people—whether they become archaeologists or not—encounter disciplinary views on history, identity, power, and social change. It is also a setting of opportunity, where we reckon collectively with the discipline's pasts to shape its futures.

Hodgskiss, Tammy (Origins Centre, Faculty of Science, Wits University)

[225]

Touching the Colors of the Past: Ochre Painting Workshops at the Origins Centre Museum, South Africa

Ochre is a colorful thread that meanders through our human story. This iron-rich pigmentous rock became habitually used by *Homo sapiens* during the Late Pleistocene in Africa. It was later used in the creation of rock art paints and is still used around the world in various ways. Ochre painting workshops are offered at Origins Centre Museum in Johannesburg, South Africa, as part of the larger museum experience and outreach program. The interactions offer an immersive, archaeologically inspired activity to bring the past to life and to make the museum content more meaningful; to touch the past and be a part of it. The workshops are created using archaeologically informed content and tools to teach about the past uses of ochre while allowing the attendee to explore the subject from different ways of producing ochre powder, different tools for mixing and painting, to the range of ingredients used as binders and aggregates. The workshops allow the colors of the past to come to life. However, they also create a platform for meaningful, culturally-specific accounts of current ochre applications (from ingestion to sunscreen) that could inform our understanding of past archaeological ochre use practices.

Hodgskiss, Tammy [162] see De La Peña, Paloma

Hoehl, Reagan [104] see Tarry, Sarah

Hoerig, Karl (Pascua Yaqui Tribal Historic Preservation Office), Anabel Galindo (Northern Arizona University) and Thomas Sheridan (University of Arizona)

[88]

Itom Hiaki Lutu'uria: Validating Archaeology with Our Yaqui Truth

Non-Indigenous anthropology and historiography of the Yaqui people have concentrated on two foci: sixteenth-century resistance to Spanish conquest followed by supposed wholehearted acceptance of Jesuit Catholicism in southern Sonora, and late nineteenth- / early twentieth-century migration from Mexico to the United States to escape Porfirian genocide. This has resulted in a narrative of Yaquis as foreign refugees in the United States that ignores Yaqui traditional understandings and significant historic and archaeological evidence. *Itom Hiaki Lutu'uria, Our Yaqui Truth*, tells of Hiaki ancestors traveling, trading, and living among other communities throughout the Sonoran Desert region and beyond for many centuries before the arrival of European invaders. As part of a Pascua Yaqui Tribe-sponsored effort to expand understanding of Yaqui history, we are documenting oral traditions and reconsidering archaeological data and historic records that illuminate the ancient Yaqui presence across the greater Southwest.

Hofman, Corinne [127] see Kelly, Harold

Hofman, Courtney [200] see Buckser, Sarah

Hofman, Courtney [202] see Wann, Kevin

Hofmanová, Zuzana (Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany)
[233]

HistoGenes: Integrating Genetic, Archaeological, and Historical Perspectives on Eastern Central Europe of the First Millennium CE

I will present the ERC-sponsored project HistoGenes, an interdisciplinary project that engages archaeologists, geneticists, anthropologists, and historians in a fine-grained analysis of more than 6,000 burials in the Carpathian Basin between 400 and 900 CE in order to understand population changes, mobility, social structures, and cultural practices in this complex region. The presentation will consist of two parts: first, I will present the guiding principles and methods that we are employing and developing in the project, which include a comprehensive analysis of carefully selected individual cemeteries rather than representative sampling; inference of close and distant biological relatedness from genetic data obtained from each individual with preserved skeletal remains and analysis of large networks of identity-by-descent connections; incorporation of both archaeological and genetic data in a joint statistical framework; detailed analysis of grave types, grave goods, spatial organization of burials and isotopic signatures, including Sr, N, and O and anthropological and pathogen analysis of select burials. Second, I will illustrate the effectiveness of this method by presenting a case study drawn from the project conducted by the HistoGenes team from ELTE University in Budapest, the Institute for Advanced Study, University of Vienna, and Max Planck Institute of Evolutionary Anthropology.

Hoggarth, Julie (Baylor University), Claire Ebert (University of Pittsburgh) and Douglas Kennett (University of California, Santa Barbara)
[295]

Climate and Cultural Responses in Belizean Prehistory

Over the past 25 years, numerous paleoclimate studies have been published across the Maya Lowlands, providing the climatic context for cultural change from Preclassic through modern times. Increasing archaeological studies have followed suit by documenting cultural responses and adaptations to major climatic changes, such as drought and hurricanes. Here, we summarize the paleoclimate records that have been published across Belize, identifying general trends through time and space. We also present new and published archaeological data from multiple areas of Belize in order to gauge the growth, decline, and reorganization of regional populations that may have co-occurred with climatic changes. Together, we aim to assess how climate, particularly drought, may have shaped Belizean prehistory from the Preclassic to colonial periods.

Hoggarth, Julie [107] see Kidwell, Jasmine

Hoggarth, Julie [318] see Roa, Ian

Hoggarth, Julie [199] see Smith, Audrey

Hoggarth, Julie [266] see Suarez, Nicholas

Hoil Gutiérrez, Julio Cesar
[83]

El pasado y presente de la meliponicultura de los mayas yucatecos

La meliponicultura yucateca actual experimenta dos realidades contrastantes: por un lado, enfrenta un escenario crítico que poco tiene que ver con el auge del que gozó en el pasado, y por el por el otro, es objeto de algunos esfuerzos por rescatarlo y preservarlo con el fin de evitar su extinción como práctica productiva y cultural, sobre todo por sus propiedades medicinales. En este trabajo se muestra el papel medular de la meliponicultura en el sistema milpero de los mayas yucatecos y en la economía en la Colonia, revelando así su auge en el pasado. Asimismo, se pretende dar cuenta de las diversas expresiones religiosas que sustentaban la crianza de abejas meliponas durante este período. Como tercer objetivo, se argumenta que, en la actualidad, la meliponicultura ha dejado de ser una práctica común entre los mayas yucatecos, orientándose al tratamiento técnico-productivo para garantizar la producción efectiva de miel para su comercialización y uso medicinal, como un esfuerzo por evitar su desaparición, aunque desvinculada del

trasfondo cultural y simbólico que lo caracterizó en el pasado. Se trata de un estudio etnohistórico que se sustenta en fuentes documentales en maya yucateco y en español, así como en investigación etnográfica.

Hojo, Yoshitaka [239] see Goto, Akira

Hojo, Yoshitaka [239] see Sekiguchi, Kazuhiro

Hoksbergen, Benjamin [6] see Weber, June

Holcomb, Justin (University of Kansas) and Rolfe Mandel (University of Kansas)
[281]

Incorporating Soil Micromorphology into First American Research: A Tale of Two Sites

Over the past several decades, the application of soil and sediment micromorphology in geoarchaeology has flourished, especially outside of the Americas. Despite widespread acceptance and use of various micromorphological techniques by our European counterparts, a similar fluorescence has yet to occur among geoarchaeologists who are focused on the early archaeological record in the Americas. Here, we demonstrate the utility of soil micromorphology at two Paleoindian sites: Bluefish Caves in the Yukon Territory of Canada and the Genevieve Lykes Duncan (GLD) site in the Chihuahuan Desert of Southwest Texas. The Bluefish Caves site consists of four rockshelters preserving loess and colluvium, and GLD is an open-air site with stratified cultural deposits in alluvium. In addition to being in dissimilar geomorphic and bioclimatic setting, the sites have different paleoclimatic histories. Here, we show how soil micromorphology can address issues of stratigraphic integrity, evaluate site formation processes, and aid in paleoenvironmental reconstructions. We suggest that the future of First American research should consider incorporating micromorphological analyses into geoarchaeological research designs.

Holcomb, Justin (University of Kansas)
[336]

Discussant

Holcomb, Justin [281] see Blong, John

Hole, Frank [61] see Tonoike, Yukiko

Holen, Kathleen (Center for American Paleolithic Research) and Steven Holen
[145]

Impact Notches on Megafaunal Limb Bones: Hammerstone versus Carnivore Tooth Notch Shapes on Samples of Experimental, Paleontological, and Archaeological Bones

Impact notches on megafaunal limb bones can be diagnostic of marrow extraction and tool blank production behavior by hominins. Notch shape statistics have been applied to impact-fractured megafaunal limb bones from Old World Paleolithic sites to demonstrate hominin technology that begins 2.6 mya in Africa. We compare data from experimental cow femora breakage experiments, first from hammerstone-produced notches, and second from experimental static pressure notches on cow femora to mimic tooth impact. Comparative statistics demonstrate significant differences in notch shape between high-velocity impacts and static pressure. We compare percussion notch shape on cow femora with notches on camel limb bones from a 550–780 ka paleontological site in California and a 350 ka site in Nebraska. These notch shapes match the pressure-produced notch shapes and appear to be representative of tooth pressure notches. These data are then compared to notch shape from experimental hammerstone breakage of elephant femora and notches on archaeological specimens of mammoth limb bone. The notch shapes on elephant and mammoth limb bones compare well with the hammerstone impact shapes on cow bone but not with the notches produced by

pressure. We propose that impact notch shape can identify human versus carnivore-produced notches in the archaeological record.

Holen, Steven [145] see Holen, Kathleen

Holland, Kendall [282] see Stoker, Owen

Holland-Lulewicz, Isabelle (Pennsylvania State University)

[301]

Chair

Holland-Lulewicz, Isabelle (Pennsylvania State University) and Jacob Holland-Lulewicz (Pennsylvania State University)

[301]

Shellfishery Management and the Socioecology of Community-Based Sustainability

How do human settlements grow sustainably? What is the capacity of both our institutions and our local ecologies to mediate the pressures of demographic growth? Nowhere are these questions and challenges more critical today than in coastal zones, where populations grow exponentially. For millennia, Indigenous populations across the globe have navigated the complexities and sensitivities of estuarine ecosystems, leaving robust archaeological records of long-term, adaptive histories. This study seeks to understand how the management of public goods, specifically shellfish, and the organization of key social institutions may have changed over time on the Georgia Coast (USA), ca. 500–1,000 years ago, as densely populated towns grew. More specifically, we investigate the growth of one of the largest Ancestral Muskogean towns to have existed along the Atlantic Coast, on Ossabaw Island, and the ways shellfisheries were collectively managed in the face of growing demographic pressures on both local ecologies and social, political, and economic institutions. To do so, we employ a shellfish dataset from 23 sampled household shell middens across a single town to evaluate the kinds of pressures that population growth may have had on shellfish resources and how people organized access and use-rights to these resources across households.

Holland-Lulewicz, Isabelle [229] see LeFebvre, Michelle

Holland-Lulewicz, Isabelle [259] see Oliveira, Cristina

Holland-Lulewicz, Jacob (Penn State) and Jason King (Center for American Archeology)

[204]

From Micro-histories to Macro-trends: Constructing Time and Temporality in the Lower Illinois Valley

One of Stuart Struever's primary contributions to the archaeology of the Lower Illinois Valley was his work outlining a regional culture-history that sought to organize and lend substantive temporality to critical trends and transformations in human social processes. The empirical foundations of these histories were primarily variability of ceramic styles and technologies across space and time. We build on Struever's contributions by leveraging a Bayesian interpretative framework that formally integrates ceramic data and radiocarbon data at multiple scales. At the macroregional scale, we evaluate the temporal framework of the regional ceramic chronology using extant radiocarbon and ceramic data. With a suite of new AMS dates from the Middle Woodland period Mound House site (11GE7), we explore (1) how regional ceramic chronologies articulate with site-based assemblages and (2) construct a high-resolution internal chronology for the site, which Struever considered to be one of the most important mound centers in the region.

Holland-Lulewicz, Jacob (Penn State)

[301]

Discussant

[301]

Chair

Holland-Lulewicz, Jacob [301] see Holland-Lulewicz, Isabelle

Hollenbach, Kandace (University of Tennessee) and Catherine Herring (TRC Companies)
[202]*Spanning the Southern Appalachians and the Archaic–Woodland Transition: Comparing Patterns of Plant Use and Land Use in East Tennessee and Western North Carolina*

The transition from the Late Archaic to the Early Woodland periods in the Southern Appalachians is visible archaeologically by the widespread adoption of pottery, associated with changes in mobility. Here we compare changes in plant use on both sides of the mountains, which suggest that Late Archaic groups in East Tennessee cultivated native crops by 4,000 years ago, while their neighbors in western North Carolina did not pick up this practice until the Early Woodland period, around 3,000 years ago. We explore changes in land use between these two periods in both regions as well tease out nuances in decisions to invest in native crops made by groups in the Ridge and Valley versus the Blue Ridge Mountain region.

Hollenback, Kacy (Southern Methodist University), Christopher Roos (Southern Methodist University), Whitney Goodwin (University of Missouri Research Reactor) and Francesco Berna (Simon Fraser University)**[285]***Finding Fire: Techniques for Identifying Ephemeral Ceramic Firing Features in the Archaeological Record*

Firing is an important step in the life history of ceramic objects, or what some would refer to as a *chaine opératoire*. The firing environment of ceramics can yield insights into changes in fuel choice and abundance, labor estimates, degree of craft specialization, and perhaps even ritual and belief. In contrast with formal firing structures, such as kilns, or large firing features, such as large-scale communal open bonfire firings, the detection of small-scale, open firing features can be difficult. For one, they can easily be confused with hearths. Research presented here explores a possible open firing feature from the northern North American Great Plains at the Elbee Site in the Knife River Indian Villages National Historic Site, North Dakota. Step-wise clay oxidation analysis, experimental archaeology, and microarchaeology (micromorphology, charcoal reflectance, micro-FTIR, SEM) are combined with excavation data and ethnoarchaeological cases to build a model of inference.

Holley, Marsha (University of Alabama) and Frank McMains (Independent Researcher and Photographer)**[24]***Spinning Knowledge: Applications of High-Resolution Photogrammetry and Experimental Archaeology with Lithic Gorgets at Poverty Point WHS*

Photogrammetry, the production of 3D models from composite photographs, presents numerous possibilities in archaeological research and expands the accessibility of the field. We will discuss the potentials of high-resolution photogrammetry as an important resource, not only for research and analysis but also for consultation, collaboration, and accessibility. Focusing on a case study containing 250 lithic gorgets from Poverty Point WHS, we demonstrate the usefulness of high-resolution photogrammetry as an important tool for experimental research and use-wear analysis. This paper delves into the lack of research and interest on ground stone in the Lower Mississippi River Valley and fills important gaps of knowledge pertaining to the potential functions of lithic gorgets in the southeastern United States, particularly within the Poverty Point Culture. The photogrammetric methods demonstrated strengthen research and center accessibility and consultation as key proponents of archaeological research.

Holley-Kline, Sam (University of Maryland)**[166]***Transnational Labor in Maya Archaeology, 1910–1930*

Discussions of knowledge production and working conditions in archaeology increasingly draw scholarly attention to labor, as represented in recent work by Allison Mickel, Paul Everill, and others. For the most part, discussions of labor focus on the interpretative losses spurred by colonial relations of knowledge production and unfair working conditions, especially among locally hired workers and in colonial contexts. However, institutions like the Carnegie Institution of Washington, the Penn Museum, and others depended on the labor of transnational workers. I use recent archival research in the American Philosophical Society and the Carnegie Institution for Science to sketch out the origins, participation, and management of transnational workers in the Maya region. I conclude by arguing that understanding transnational labor in Maya archaeology during the early twentieth century enables a bottom-up understanding of the politics of archaeology in context, especially vis-à-vis race, export economies, and corporate imperialism.

Hollimon, Sandra (Santa Rosa Junior College)**[304]***Women's Leadership and Ritual Specialization in Coast Miwok and Kashia Pomo Cultures*

Employing theoretical and interpretive frameworks influenced by the research of Jeanne E. Arnold, I examine the roles of women in the ritual organizations of these two Native California cultures. I address the antiquity of these ritual systems and the ways that their secret societies promoted regional integration. The ritual and political specialists known as *maien* (Coast Miwok) and *walipo* (Coast Miwok and Kashia Pomo) are the focus of my discussion. I examine the similar beliefs and practices in these ritual systems, and women's leadership in social control in these cultures. I conclude by placing the roles of elite women in the broader context of sociopolitical organization in Coast Miwok and Kashia Pomo cultures.

Holly, Donald (Eastern Illinois University)**[168]***Chair***Holly, Donald (Eastern Illinois University)****[168]***The Archaeology of Forgetting, and the Dorset*

Forgetting, an attendant to culture change, is the stuff of history. When cultural innovations, exchange, and adoption occur, previous customs, knowledge, technology, and other dimensions of culture are lost—they are forgotten. This paper considers the phenomenon of forgetting and its permutations—the passive forgetting that is more or less an accepted outcome of change, the willful forgetting of erasure, and the accidental forgetting that is unintentional and undesired—as a way of understanding culture loss among the Dorset Paleolnuit peoples of the Eastern North American Arctic.

Holman, Lindsay (Jacksonville State University)**[197]***The Value of 3D Models in the Classroom*

This poster demonstrates the pedagogical value of 3D models of ancient artifacts for teaching ancient history. I produced 3D replicas of two examples of Herzog's tesserae, with permission of the museums that hold the original artifacts, to teach classes about Roman material culture, ancient Mediterranean slavery, and Roman freed persons. The 3D models were printed to scale and include the Latin inscriptions present on all four sides of the Roman tessera. I have adapted this exercise for the topic and audience. Nevertheless, when using the 3D printed examples there was ample engagement from students at the high-school level, first-year students in undergraduate surveys, and students in upper-level undergraduate courses. The experiential learning exercise asks students to note their observations, hypothesize who used these artifacts, and what

they were used for. In upper-level surveys, this paved the way for discussions of historiography in a way that engaged more students in the class. Students theorized the function that nineteenth- and twentieth-century ancient historians posited for these artifacts. The 3D examples would accompany the posters allowing viewers to engage with them. The poster will also include 2D images of the original artifacts.

Holmes, Charles [168] see Smith, Gerard

Holt, Benjamin [263] see Comer, Jacob

Holt, Emily (Statistical Research Inc.) and Richard Madgwick (Cardiff University)
[334]

Mobility and Animal Economy in the Early Nuragic Culture: A Case Study from South-Central Sardinia

The origins of Sardinia's Bronze Age Nuragic Culture remain poorly understood. Few early Nuragic sites have been systemically excavated and published, making it difficult to assess the social, political, and economic processes that took place in the Middle Bronze Age and laid the foundations for the culture's Late Bronze Age florescence. The research project ZANBA: ZooArchaeology of the Nuragic Bronze Age is contributing to new understandings of the political economy of the early Nuragic settlement of Sa Conca 'e sa Cresia, located on the Siddi Plateau in the Marmilla region of south-central Sardinia. Combining morphological analysis of the faunal assemblage with carbon, nitrogen, and strontium analysis of domesticated animal remains, ZANBA is assessing hunting, animal husbandry, and patterns of mobility to understand changing economic strategies and their relationship to the growth of power at the site.

Holt, Evan (Utah State University) and Stefani Crabtree (Utah State University; Santa Fe Institute)
[99]

The Human Place in Northern Mongolian Food Webs

Mongolian culture has been defined by nomadic pastoralism for nearly 5,000 years. Throughout that time, nomadic pastoralists built a specific niche in their local ecosystems. The Darkhad Depression of Northern Mongolia represents a case where traditional nomadic pastoralist lifestyles are at the forefront of the climate catastrophe despite these practices being sustained for thousands of years. Human-inclusive food web studies are one way that archaeological techniques can be used as tools for resolving modern ecological questions about resilience and sustainability in the face of climate change. Food webs are ecological networks linking consumers and resources within an ecosystem, i.e., who eats whom. When modern food webs are combined with archaeological data, the role of humans within their local ecosystems can be extrapolated back in time to gain deeper understandings of humans' roles in and impacts on their ecosystems. This is especially important when asking questions about how certain practices can be sustained for thousands of years and how those practices entrench humans into specific ecological roles. Here, we plan to present the preliminary results from ethnographic interviews of nomadic pastoralists about their niche in the local ecosystem of the Darkhad Depression and how it has changed throughout their lifetimes.

Hommel, Peter [151] see Ventresca-Miller, Alicia

Honeychurch, William [256] see Carolus, Christina

Hoopes, John (University of Kansas)**[222]***Contributions of Richard G. Cooke, PhD, MBE, to the Study of Isthmo-Colombian Iconography*

Richard Cooke's pioneering studies in zooarchaeology of the Neotropics have redefined the way that archaeologists, art historians, ethnohistorians, and ethnographers utilize data from faunal remains, not only in the reconstruction of past environments, subsistence strategies, and diet, but also in the interpretation of nonhuman animal species in the art and iconography of the Isthmo-Colombian Area. His meticulous and perennially critical work produced detailed evaluations of fish, birds, reptiles, amphibians, mammals, and insects in media ranging from pottery to goldwork, emphasizing Indigenous peoples' powers of empirical observations of the natural world, in so doing contributing to our understanding and valuation of detailed observations of the fauna of prehispanic Panama. With his exhaustive multidisciplinary approach, Cooke consistently raised the bar for archaeology with respect to responsible reporting and documentation of Indigenous zoology in the context of modern ecology and the testing of iconographic interpretations using hard, empirical evidence based on careful scientific excavations.

Hoover, Corey (Louisiana State University)**[198]***Human-Environment Relationships and Spatial Organization in the Nepeña Valley, Ancash Peru*

The built environment is not a simple, haphazardly constructed idea. The human condition and cultural components, combined with environmental factors have undoubtedly influenced the built environment situated within landscapes. Not only are these landscapes environmental, but also social. In addition, these landscapes are not static and are subject to change based on many factors including human to human interactions, human to environment interactions, and environmental processes. This investigation explores an ontological approach to landscape, movement and spatial organization. It uses ethnographic and geospatial approaches to explore interactions between humans, social, and environmental spaces. This study takes place in the Nepeña Valley in Ancash Peru, host to archaeological sites spanning from the Preceramic to Late Horizon. This work will focus on utilizing geographic information systems and spatial analyses in order to discuss human-environment interactions through time and space taking advantage of several techniques such as ecological modeling, historical environmental datasets, and landscape models while considering the ontological approach when constructing datasets, defining significant variables, and interpreting data outputs.

Hoover, Hannah (University of Michigan)**[323]***Networking Households, Building a Nation: Investigating the Social Organization of Eighteenth-Century Yamasee Towns in South Carolina*

The application of social network analysis to archaeological research in the US Southeast has largely focused on interregional mobility and exchange. In this paper, I instead explore how small-scale social networks maintained by households shape larger-scale community structures. For several millennia in the US Southeast, households were the domain of women and the dominant institution for organizing social relations in Indigenous communities. Households were also places where new and old cultural traditions were mediated during the colonial period. In the seventeenth and eighteenth centuries, the volatility of the Indian slave and fur trades led to the emergence of several powerful multiethnic Native nations. This includes the Yamasee, a community of ancestrally diverse people who migrated to and built a nation in the Port Royal Sound of South Carolina at the turn of the eighteenth century. Herein, I compare practices of household ceramic production, focusing on raw clay processing, paste recipes, and macro-stylistic traits, from domestic contexts at six Yamasee towns to map the nodes, ties, and strength of social networks that connected Yamasee households through kinship and social learning. These multiscale networks facilitated this period of Yamasee nation-building, ultimately culminating in 1715 with the Yamasee War against the Carolina colony.

Hoover, Hannah [266] see Heller, Cassidy

Hoppa, Kristin (Channel Islands National Park)**[167]***Increasing Inventory Together: Recent Co-stewardship Efforts at Channel Islands National Park*

Channel Islands National Park has been steadily increasing tribal involvement into all aspects of archaeological field work through a series of cooperative agreements, funding collaborative survey work, monitoring of vulnerable sites, hands-on treatment and stabilization, and broader efforts related to access and traditional use. This paper shares lessons learned on successfully navigating co-stewardship efforts, and reports on results from the 2023 field season on Santa Cruz and Santa Rosa Islands within Channel Islands National Park, California.

Hopper, Courtney (University of British Columbia) and Camilla Speller (University of British Columbia)**[215]***Paleoproteomic Perspectives on the Subsistence Decisions of Later Stone Age Herders in Namaqualand, South Africa*

Ceramic-bound protein characterization, or paleoproteomics, can provide vital insight into the species-specific dietary decisions preserved in the pottery of past populations. This insight is particularly relevant for understanding the subsistence choices of Later Stone Age (LSA) herders living in the Namaqualand coastal desert of South Africa. In this region the sheer number of morphologically similar bovid species often found at archaeological sites, when fragmentary, are difficult to identify to species. However, a rich and underutilized archaeological resource exists in abundance: ceramic sherds that preserve the biomolecular traces of ancient meals cooked in pottery. Although organic residue analysis (ORA) of ceramic residues is a powerful tool it can only characterize the preserved lipids of past meals into broad categories (dairy, ruminant, non-ruminant), lacking the taxonomic specificity often needed when both wild and domesticated ruminants of a similar size are present. To test the feasibility of paleoproteomic characterization of ancient pottery from Namaqualand, ~50 potsherds previously characterized through ORA were selected from four archaeological sites to investigate protein preservation. Proteomic analyses of ceramics will be integrated with previous ORA and faunal composition data to examine how LSA herders living in Namaqualand incorporated domesticated and other wild ruminants into their diet.

Hopt, Justin (Oregon Department of Fish and Wildlife) and Daniel Pettit (Oregon Department of Fish and Wildlife)**[269]***Cultural Resource Management of Denman Wildlife Area, Southwestern Oregon*

The Oregon Department of Fish and Wildlife (ODFW) currently manages the 1,858 acre Denman Wildlife Area, located within the Rogue Valley of southwestern Oregon. The Denman Wildlife Area contains a dynamic fluvial and cultural history that makes archaeological management and habitat restoration of the wildlife area challenging. Included within the boundaries of the wildlife area is the confluence of the Rogue River and Little Butte Creek. The Rogue River has shifted course at least four times between 1855 and 1983. Additionally, the confluence of the Rogue River and Little Butte Creek is the reported location of several precontact village/camp sites as well as the described location of the Lupton Massacre, a devastating event that started the Rogue River War of 1855–1856. Following all of this, the area was then utilized for a World War II training encampment known as Camp White. None of this history has been well documented archaeologically. This study presents the results of background research and initial field work on the Denman Wildlife Area and presents recommendations for how best to manage future work, both archaeological and habitat restoration, on the wildlife area.

Hopwood, David (Vancouver Island University) and Emily Munroe (Vancouver Island University)**[68]***Life within Death: Contextualizing Burial Practice at Kenan Tepe, Turkey, from the Ubaid Period to the Early Bronze Age*

Kenan Tepe, Turkey, is a multi-period archaeological site that was occupied during the Ubaid period (5000–4000 BCE), the Late Chalcolithic (3360–3020 BCE), and early Bronze Age (3000–2800 BCE) (Parker and Cobb 2012). During each of these periods residents of Kenan Tepe conducted distinct burial practices. These burials included the remains of individuals ranging from in utero infants to older aged adults and represent multiple burial types and patterns. The excavated burials provide insights into individual health and social position; and reflect deeply embedding meanings in the burial practice. However, the practice of burial does not exist outside the larger social context. Shifting settlement patterns, socioeconomic systems and ideologies impact the practice of burial. An examination of the burial practices from the Ubaid to the Early Bronze at Kenan Tepe provides a window into a changing society and helps to situate the site in a larger regional and temporal context.

Hopwood, Marie (Vancouver Island University)

[257]

Why Bappir Matters: Using Experimental Archaeology of Beer in the Classroom

As a unique category of socially charged material culture, beer has origins stretching back to people's first obsession with wild grain. The deep time prehistory of beer coupled with the unique role of its psychoactive properties makes it a compelling bridge between academic archaeology and the public, allowing for approachable discussions of the ancient past. Experimental archaeology allows us to bring beer into the classroom in a significant (not necessarily tipsy) way. In a recent upper-level Material Culture Analysis course, I challenged students to create modern homebrew recipes based on the famous Hymn to Ninkasi, specifically involving the creation of *bappir*, or beer bread. This module includes experiments with malting grain, interpreting ancient texts for operational chain clues, using organic residue analysis and floral evidence to predict ingredients and flavor profiles, and of course brewing based on the students' research. Through the hands-on experimentation students gain a better sense of what this beverage was in an ancient Mesopotamian context, how to use operational chains to understand a form of technology and devise research strategies, as well as perhaps drinking beer like a Sumerian . . . through a straw.

Hopwood, Marie (Vancouver Island University)

[294]

Chair

Hopwood, Marie [294] see Carbonell, Curt

Horn, Sherman (University of California, Santa Barbara)

[74]

Discussant

Horn, Sherman [251] see Haines, Helen

Horning, Audrey (College of William and Mary)

[258]

Pragmatism and Peacebuilding: Building an Empirically Honest, Ethically Engaged Archaeology

Building on literature from peace and conflict studies as well as social justice movements, I consider the role and responsibilities of archaeologists as we grapple not only with our positionality in the present, including our roles as citizens and scholars, but the manner in which we mobilize the past in aid of the future. I address recent critiques of engaged archaeologies and argue for the central importance of both empirical honesty and an underpinning in pragmatic philosophy as we frame our explorations of the past for purposes of social justice. I draw specifically from my work in embedding archaeology and heritage with conflict transformation in Northern Ireland to argue for a pragmatic approach that engages archaeological evidence as an active component of peacebuilding dialogue that is challenging and constructive rather than uncritically conciliatory.

Pragmatism, in these circumstances, is the most effective paradigm for a future-oriented, epistemologically honest, and ethically grounded archaeology.

Horning, Audrey (College of William and Mary)

[325]

Discussant

Horowitz, Rachel (Washington State University) and W. James Stemp (Keene State College)

[126]

Understanding Ancient Maya Expedient Lithic Technology: Raw Material, Production, and Use

Expedient flaked stone tools, generally defined as those which are produced as needed, without standardization, and with little to no investment, are less often examined in the archaeological record than formal stone tools, those which require more skill and effort to produce following a prescribed method or template. This is certainly the case in sedentary societies, where formal tools and expedient (or informal) tools coexisted and were used differentially in a variety of situations. Throughout the Maya area, expedient tools are used both in contexts of resource shortages and in resource-rich contexts. Such contrasts are illustrated in the use of both local (chert) and nonlocal (obsidian) resources. We provide case studies from the eastern Maya Lowlands which illustrate the variable contexts in which expedient technology was utilized both to conserve resources and in those areas in which conservative strategies were not necessary. As such, we argue that previous discussions of the connection between sedentism and expedient technology require more nuance, and that expedient technology as a strategy has many causes. In the Maya area, studies of expedient lithic technologies can provide information on access to raw materials and the economic networks through which people acquired their tool resources.

Horowitz, Rachel (Washington State University)

[292]

Discussant

Horowitz, Rachel [129] see Brouwer Burg, Mariëka

Horowitz, Rachel [202] see Sobel, Sonya

Horowitz, Rachel [251] see Stemp, W. James

Horowitz, Rachel [265] see Thompson, Jordan

Horowitz, Rachel [282] see Toombs, Garrett

Horowitz, Rachel [251] see Yaeger, Jason

Horsley, Timothy [253] see Henry, Edward

Horton, Elizabeth [82] see Mueller, Natalie

Horton, Mark [217] see Crowther, Alison

Horton, Mark [233] see Kassadjikova, Kalina

Hosek, Lauren (University of Colorado, Boulder)

[80]

Conversion on the Periphery: Bioarchaeology of Religious Identities in Early Medieval Bohemia

The ninth and tenth centuries in Central Europe have historically been characterized by political consolidations around Christian leadership. As Christianity gained influence in the region, conversion altered far more than religious beliefs: political landscapes, material culture, and bodies were also transformed. The

skeletal remains and mortuary contexts of 260 individuals from the early medieval Akropole and Kanín cemeteries at Libice nad Cidlinou in what is now Czechia are compared to examine how social status and engagement with Christianity influenced daily life as well as mortuary practices for people in central Bohemia. To do so, osteological data is integrated with archaeological and textual sources. Results suggest that individuals buried at the more peripheral Kanín cemetery were more likely to participate in alternative, pre-Christian mortuary traditions, while those buried in the centralized, elite Akropole burial space were more likely to follow Christian practices and prescriptions in daily life as well as in death. This study highlights the performative potential of conversion for particular social strata as well as the rich syncretism shaping expressions of early Christianity in Central Europe.

Hosek, Lauren (University of Colorado, Boulder)

[143]

Discussant

Hosey, Kimberly [45] see Zabecki, Melissa

Hosfield, Rob [138] see Milks, Annemieke

Houck, Nicole (Drayton Hall Preservation Trust)

[284]

Early Ceramics in Charleston's Tidal Region

In June 2023, archaeologists and volunteers from the Drayton Hall Preservation Trust conducted a two-day limited data recovery at a private residence along Charleston's historic Battery. The lot, impacted by both Civil War bombardment and the 1886 earthquake, holds significance as the current house was built by a Drayton descendant in the 1880s. Located beyond the walled city, the East Battery area was assumed to be largely undeveloped until the nineteenth century due to tidal flooding. However, the discovery of significant ceramics dating to the seventeenth and early eighteenth centuries may shed light on potential early homesteads in this tidal region and raises questions about early trade routes and goods that may have played a role during the early settlement of Charleston.

Houk, Brett (Texas Tech University)

[74]

Discussant

[213]

Chair

Houk, Brett (Texas Tech University), Elizabeth Graham (University College London) and James Garber (Texas State University)

[251]

Historical Archaeology in Belize: Maya Continuity amid Colonial Landscapes

We can trace the roots of historical archaeology in Belize to 1974, when David Pendergast launched a project at a site known locally as Indian Church, not surprisingly owing to the remains there of an early church. Today, the site is known as Lamanai. Identification of Spanish colonial sites in Belize such as Lamanai and Tipu began with J. Eric S. Thompson's investigation of Spanish documents. In 1978, guided by Thompson's research, Grant Jones and David Pendergast visited what excavations in the 1980s confirmed to be Tipu. Tipu and Lamanai represent the first two excavations of historical Maya sites in the southern Maya lowlands. Ethnohistorical research by Grant Jones, Angel Cal, and Nigel Bolland, among others, has expanded the scope of "traditional" Maya archaeology to include historical sites. Archaeologists in Belize have investigated early historical sites as well as more recent villages, camps, and towns representing Belize's diverse colonial period

cultures including the British, Creole, San Pedro Maya, and even ex-patriated Confederates. In this paper, we summarize the development of historical archaeology in Belize, which has revealed new data about the continuity of Maya occupation amid the changing cultural landscape of the colonial period.

Houk, Brett [251] see Chase, Adrian

Houk, Brett [213] see Degnan, Bridgette

Houk, Brett [226] see Ingalls, Victoria

Houkes, Abigail

[143]

Discussant

Houle, Jean-Luc (Western Kentucky University)

[151]

Chair

Houle, Jean-Luc [151] see Égüez, Natalia

Housse, Romuald (Archaïos & Paris I - Panthéon Sorbonne) and Arthur Mouquet (Paris I - Panthéon Sorbonne)

[185]

Can Chullpas Provide a Better Understanding of Territorial Organization during the Late Intermediate Period? New Perspectives through Pacajes and Lupacas Areas and Their Influences in the South-Central Andes

The construction of chullpas in the south-central Andes, and more particularly in the Lake Titicaca basin, is certainly one of the major characteristics of the Late Intermediate period (1000–1450 CE). Building on prior research and extensive surveys coupled with spatial analysis, this presentation aims to shed new light on the role of chullpas in territorial organization and identity construction during a period marked by political fragmentation. By examining the Lupacas and Pacajes territories, situated along the southern and western shores of Lake Titicaca, we illustrate the significance of these structures within the core territories of chiefdoms, as well as in their broader spheres of influence, such as the western valleys of Tacna. Our work allows us to reconsider the many forms that these structures can assume, but also to better understand the political changes that seem to occur between the Late Intermediate period and the Late Horizon (1450–1532 CE) in the peripheral valleys, illustrating the alliances and influences that occurred at the arrival of the Incas in the region.

Housse, Romuald [242] see Delaere, Christophe

Housse, Romuald [323] see Kohut, Lauren

Houston, Stephen (Brown University)

[90]

Discussant

Houston, Stephen [26] see Garrison, Thomas

Howard, Sully and Richard Mermejo (Picuris Pueblo)

[84]

Picuris Ethnogeography

This paper explores the deep history of Picuris Pueblo's commitment to its surrounding landscape through

traditional knowledge of the meanings inscribed therein. We focus on both natural places (springs, mountain peaks, clay deposits) and cultural constructions (rock art, medicine boulders, race tracks, and other “shrine” features), along with the stories that surround them. Our primary goal is archival: at the request of the tribe, to create a written record of significant places, place-names, and place-based traditions for future community members, a task that feels pressing as key elders with traditional knowledge have recently passed. But our research is simultaneously an attempt at critical mapping and is consequently mobilized by land claims and water dispute issues. From the tribe’s perspective, our work is not uncovering any new evidence; rather it reaffirms what the tribe already knows. Framed in a political manner, however, such ethnogeographical work—through the documentation of place-names and archaeological evidence of space/place practices—supports Picuris’s political assertion of its sovereignty over the watershed. Finally, our work offers another important example of placemaking in the American Southwest, examining how places become saturated with meaning.

Howell, Cameron (HNTB) and Dominic Day (HNTB)

[172]

Using AI Tools in ArcGIS to Identify Mining Features in Northern Georgia

During the course of a cultural resources survey in Bartow County, Georgia, for the Georgia Department of Transportation, several features related to past mining activities were identified on the surface. These features, consisting of mining cuts and collapsed tunnels, could be identified from lidar available from the USGS. This project takes these ground-truthed mining features and evaluates various AI-enhanced methods of image and point data classification within ESRI’s ArcGIS program for identifying these types of features. The goal is to arrive at a method that will allow the classification of the mining landscape of northern Georgia by identifying likely extant features. The resulting dataset will aid in the planning of cultural resource management activities by identifying areas with a high likelihood of mining related features as well as creating a process that can be applied to other places and landscapes with similar records of mining.

Howell, Devon (Western University), Jennifer Newton (Trent University) and Helen Haines (Trent University)

[69]

Maya Dental Modifications: Insights from Ka’kabish, Belize

This research investigated the intentionally modified dentition found within chultuns at the Maya site of Ka’kabish, Belize. The site has a history spanning from the Middle Formative (800–600 BC) to the Postclassic (AD 900–1500) periods. The primary aim of this research was to closely examine the modified dentition, evaluate any dental pathologies present, and contextualize the sample in relation to the mortuary context from which the remains were excavated. In conducting this research, we worked to gain a deeper understanding of the potential sociocultural and biocultural factors that may have influenced the observed trends in dental modification seen at Ka’kabish. Further, this research contributes to growing body of literature that seeks to determine whether dental modification was a practice confined to specific individuals of particular social class or status. Additionally, it seeks to ascertain whether dental modification had any impact on overall dental health and whether the observed trends in dental modification at Ka’kabish differ from those at other sites, locally, regionally, and globally. Through the execution of this research, a more comprehensive understanding of how sociocultural and biocultural elements shaped dental modification trends and why populations engaged in these practices at Ka’kabish may be achieved.

Howey, Meghan (University of New Hampshire), Alyssa Moreau (University of Massachusetts, Boston) and Amy Michael (University of New Hampshire)

[268]

English Colonists and Complex Foodways in an Early Northern “New England” Frontier

The Great Bay Archaeological Survey (GBAS) explores one of the most unique estuaries along the Atlantic Ocean and a place that formed an important early frontier in seventeenth-century colonial “New England.” GBAS’s research is revealing unexpected dynamism in the lived experiences of early colonialism for both

settler colonists and regional Indigenous communities (Pennacook Abenaki peoples). We present a working analysis of a faunal assemblage from one early colonial English site to demonstrate how critical understanding foodways is to moving beyond simplistic narratives of the colonial experience in “New England.” English-introduced domestic animals, most abundantly sheep, constitute much of the assemblage and the element distribution indicates these were butchered and consumed on-site. Sheep are primarily being killed when they are juveniles, which may indicate English colonial food preferences. However, when this evidence is considered alongside the fact that the assemblage has a notable amount of wild fauna (or in Abenaki, *awaasak*), an important alternate potential interpretation of this pattern arises—food stress led English colonists to adapt and engage with and learn from regional Indigenous peoples for their survival. This interpretation resonates with trends seen in the floral remains from the site as well as other artifacts.

Howland, Matt [104] see Ritchison, Brandon

Hrivnyak, Michelle (Western Michigan University), Jacqueline Eng (Western Michigan University) and Erdene Myagmar (National University of Mongolia)

[23]

Subsistence Strategies across the East Eurasian Steppes: Exploring Connections between Diet and Dental Pathology

Within the vast Eurasian steppes, early populations utilized subsistence strategies that were uniquely developed in response to local environmental settings, and recent bioarchaeological work has underscored this connection. This study explores the relationship between dietary intake and dental pathology, focusing on dental calculus, antemortem tooth loss, and carious lesions. The formation and severity of dental calculus, while associated with factors such as oral health and genetic predisposition, has also been potentially linked to diets high in protein, and can preclude caries formation. However, the nature of this connection and how it manifests in multi-resource pastoralist populations, as compared to hunter-gatherers or agriculturalists, has received less attention. To address this, we have compared populations from Mongolia, southern Siberia, and Inner Mongolia, from archaeological contexts spanning from the Bronze Age to the medieval (Mongol) period. The findings demonstrate the interconnected biological processes of these conditions in relation to dietary intake and also help establish a baseline for comparing dental pathology rates and oral health among multi-resource pastoralist communities across time and place. To this end, the results provide a measure for characterizing the rates of these dental conditions in relation to variable subsistence strategies in the steppe region.

Hrivnyak, Michelle [282] see Hallahan, Adyn

Hruby, Zachary (Northern Kentucky University)

[291]

Discussant

[291]

Chair

Hruby, Zachary (Northern Kentucky University)

[291]

Mountains, Obsidian, and Power in Classic Mesoamerica

Lithic analysis at various sites in the Maya area, such as Plan de las Mesas, Kaminaljuyu, Copan, and Piedras Negras reveal regional differences between obsidian tool production, distribution, and consumption. Some patterns in obsidian economies were shared between these sites, as well as others more distantly located such as Los Horcones, but all of them seem to have a special relationship with Central Mexico. Some shared cultural characteristics include sculptural and architectural traditions, as well as site placement vis-à-vis sacred mountains and obsidian sources. I revisit Robert Santley's ideas about Teotihuacan expansion and the control of obsidian sources but with the goal of revising them based on recent archaeological data from the previously mentioned sites. The hypothesis is that Teotihuacanos in foreign lands, or local people influenced

by Central Mexican culture and religion, established hilltop sites for ideological, economic, and strategic reasons, as a suite of techniques of governance for political expansion. An important factor was either real or imagined control over obsidian blade cores and their distribution elsewhere in Mesoamerica. At some sites like Kaminaljuyu, this project failed in a short time, but at Copan, these techniques succeeded well into the Late Classic, long after Teotihuacan had collapsed.

Hruby, Zachary [291] see Barrios, Edy

Hruby, Zachary [291] see McNeil, Cameron

Hruschka, Daniel (Arizona State University), Robert Bischoff (Arizona State University), Cindy Hsin-yee Huang (Arizona State University) and Matt Peeples (Arizona State University)
[308]

Using ArchaMap to Help Datasets Talk to Each Other: A Case Study from Southwest Archaeology

The Center for Archaeology and Society Repository (CASR) at Arizona State University holds collections for thousands of archaeological sites. These collections are an important resource for the archaeological community, yet accessing them is difficult due to a lack of awareness of which sites are available. An exemplar of public access to data is the CyberSW project. Many sites in the CASR collection are included in CyberSW, yet it is challenging to identify corresponding sites. Here we show how ArchaMap can help solve this and related problems. ArchaMap is part of the CatMapper family of tools designed to aid in integrating datasets, documenting the integration, and making metadata about new merged datasets easily accessible. Using ArchaMap, our team has linked thousands of sites in the CASR collections and CyberSW database, permitting new synthetic analyses. A user can access the application, use the search engine to find a site, and identify whether connections exist to CyberSW, CASR, or other entities, datasets or even publications. More generally, ArchaMap can be used to reconcile and merge many categories of archaeological data from any region in the world and allows users to find the data and make connections across datasets.

Hrynick, Gabriel [154] see Spahr, Tim

Hsu, Yen-Shin [12] see Sugiyama, Nawa

Hsu, Yiu-Kang [121] see Rose, Thomas

Hu, Di (James Madison University), Erik Marsh (National Scientific and Technical Research Council), Maria Bruno (Dickinson College), José Capriles (Pennsylvania State University) and Christine Hastorf (University of California, Berkeley)

[306]

The Decline of Darts in Late Formative Taraco (Southern Lake Titicaca) and Its Implications for the Rise of Tiwanaku Hegemony

In this paper, we argue that both arrows and darts were used in the Taraco Peninsula (south Lake Titicaca) until the end of the Middle Formative period (around 250 BC), after which arrow technology began to predominate. A statistical, morphological, and chronological analysis of 187 projectile points recovered by the Taraco Archaeological Project (TAP) shows that large projectile points associated with dart technology (5C) seemed to have disappeared before the end of the Middle Formative (250 BC), while smaller points with concave bases (5D) continued into the Late Formative through Middle Horizon periods (250 BC–AD 1050). Furthermore, we show that narrow-stemmed triangular points (4E) first appeared in the Late Formative I period (250 BC–AD 300), rather than during the Middle Horizon period as previously thought. We propose that the small concave-base projectile point (5D) was primarily used as an arrow beginning in the Late Formative period, and that the narrow-stemmed triangular projectile point (4E) was exclusively used as an

arrow. Furthermore, our analysis suggests that the appearance of morphological innovations in projectile points during the Middle and Late Formative periods may signal identity formation activities related to the rise of Tiwanaku hegemony rather than hunting activities.

Hu, Di [26] see Kennedy, Sarah

Hua, Quan [289] see Hendrickson, Mitch

Huang, Cindy Hsin-yee (Arizona State University)

[308]

Chair

Huang, Cindy Hsin-yee (Arizona State University)

[308]

A Big Look at Small Tools: An Analysis of the Emergence and Dispersal of Microliths in Eurasia

The appearance of microliths and their rapid spread throughout Eurasia is one of the major developments in the evolution of Paleolithic technologies, since microliths and microblades, as part of complex modular tool packages, became the dominant technology in the Pleistocene (around 25,000 years ago) and persisted into the Holocene. Microliths are small stone blades that measure less than 50 mm in length. Typically assumed to have been hafted to projectile weapons, microliths have been seen as an important innovation because they were portable, multipurpose, and standardized tools. Despite the importance of microliths in Paleolithic record, there has been no large-scale, comparative analysis of the contexts of the emergence of these miniaturized lithics and, as such, we lack a broader understanding of the drivers of the emergence and spread of these microlithic technologies. In this study, I created a database of microlith site dates and used contemporary spatial and statistical analyses to investigate the environmental and technological contexts of the emergence and dispersal of microliths across Eurasia. This allows researchers to better understand cultural innovation and diffusion in the prehistoric past and how technological innovations facilitate, reflect, and impact human interactions with each other and their environments.

Huang, Cindy Hsin-yee [308] see Hruschka, Daniel

Huang, Cindy Hsin-yee [198] see McDowell, Alyssa

Huang, Cindy Hsin-yee [306] see Murray, John

Hubbert, Jake [183] see Ure, Scott

Huerta, Danielle (University of California, Santa Cruz)

[15]

Chair

Huerta, Danielle (University of California, Santa Cruz)

[15]

More Than a Notion: Archaeology's Issue with Using Social Theory to Comfortably Perceive the Lives of Marginalized Peoples

In archaeology, we like to theorize about those who lived at the margins of society, the systematically oppressed, the class struggle of those who existed at the bottom and the “creative” ways in which they “persisted,” “resisted,” and survived. However, despite this seemingly progressive effort to understand marginalized peoples in the past, the discipline continues to have a problem with “othering” the systematically oppressed by merely fitting the violence they experienced and the “choices” they made into trendy sociological theories. As a first-generation, mixed Xicana of Indigenous Mexican descent from the hood who

escaped the school-to-prison pipeline, I found this mirage of understanding in archaeology especially deceiving; I realized that my peers and colleagues who liked to perceive the lives of people from disadvantaged backgrounds often forget that we still exist and become uncomfortable when we assert our existence and/or relay information about our lived experiences. This paper discusses my personal experience navigating higher education and career making in academic archaeology and the ways in which I have observed that the discipline continues to chronically theorize the lives of BIPOC from impoverished and marginalized backgrounds, despite claiming to want to understand the complexities of many of our ancestral pasts.

Huffer, Damien (University of Queensland; Carleton University)

[300]

Chair

Huffer, Damien (University of Queensland; Carleton University) and Shawn Graham (Carleton University)

[300]

Buy One, Get One: The Legal and Sociocultural Context of “Gifting” within the Australian Human Remains Trade

Today’s online human remains trade—how it operates, where remains come from, and how algorithmic amplification allows for complex networks to form between buyers, sellers, and middlemen—has seen an increasing amount of research and media attention. Underpinning this interest is the growing realization that poorly regulated trafficking inflicts genuine psychological harm on the living (whether relatives of body donors or descendant communities), as well as accrues losses to the archaeological record or risks the jeopardization of crime scenes. Much of this work has focused on the Global North. Within the Global South, Australia is recognized as an emerging market country for many categories of cultural heritage, including human remains, despite relatively comprehensive legislation. This paper reviews the function and socio-legal context of a specific seller’s tactic used to bypass algorithmic detection and circumvent legislation, so far seen only among Australian human remains collectors: photographs of human remains are offered for sale and the remains themselves are included as a “gift.” Better understanding how this tactic is used and propagated through online communities is necessary to not only advocate for the closing of this loophole, but also to identify similar loopholes used by collector networks elsewhere.

Huffer, Damien [300] see Graham, Shawn

Huggard, Ashlyn (Brigham Young University)

[284]

Nonlocal White Ware in Montezuma Canyon and Its Implications

In Montezuma Canyon, southeastern Utah, San Juan Redware is the dominant decorated ceramic type in ceramic assemblages dating to the late 800s and 900s (AD). In ceramic assemblages from the site of Nancy Patterson Village (42SA21 I0) that date to this time period, 26% of the sherds are red ware, and several lines of evidence suggest red ware was made at or near the site. White ware is much less common, and it is not clear how much of it was locally produced. Recent analyses have identified white ware sherds from the Chuska Chaco regions in AD 900s assemblages from Nancy Patterson Village and other Montezuma Canyon sites, but no systematic effort has been made to identify trade wares in any of these assemblages. This poster will report on temper analysis of white ware sherds in AD 800–900s assemblages from several sites in Montezuma Canyon to document the prevalence of Chuska and Cibola White Ware in Montezuma Canyon. It will also explore the implications of these ceramic types for understanding connections between southeastern Utah and the Chaco region.

Hughes, Karissa [200] see Buckser, Sarah

Hughes, Katherine (Crow Canyon Archaeological Center) and Tyson Hughes (Crow Canyon Archaeological Center)

[266]

A Plethora of Points at the Haynie Site

The Haynie site (5MT1905) contains two of four Chaco-style great houses that make up the Lakeview Community in southwestern Colorado. Recent excavations by Crow Canyon Archaeological Center at the Haynie site have produced a large quantity of projectile points. The proportions of projectile points compared to pottery sherds can help explore the abundance of these tools when compared to other sites in the region. We examine the latest data from ongoing excavations at the Haynie site to understand this pattern.

Hughes, Tyson [266] see Hughes, Katherine

Huguet, Rosa [25] see Baquedano, Enrique

Huidobro, Consuelo (Universidad Alberto Hurtado), Josefina Macari (Fondecyt 11200857), Victoria Soto (Fondecyt 11200857) and Maria Celina Alvarez Soncini (CIT-TDF, CONICET)

[178]

Maritime Lifeways and Technological Choices of the Englefield Culture (7000–5600 cal BP) in Southern Patagonia: Insights from Obsidian and Bone Tool Analysis

The Otway Sea and Strait of Magellan region in Southern Patagonia witnessed the emergence of maritime lifeways approximately 7,000 to 5,600 years ago, leading to the establishment of the “Englefield Culture.” This culture is characterized by its bone and lithic technology, notably the use of green obsidian. Our research is dedicated to reconstructing the toolkits employed by the Englefield Culture through use-wear analysis, with a focus on three sites from Englefield Island: Bahia Colorada 1, Pizzulic 2, and Englefield 1. Our findings uncover the existence of distinct toolkits tailored for various activities within this culture. These encompass specialized implements for hunting purposes, including bone harpoons, spears, and obsidian weapon heads. Notably, woodworking tools such as bifacial knives and flake tools reveal compelling evidence of reactivation and persistent reuse. Another category of tools was dedicated to processing soft and medium elastic animal materials. Finally, among the macrolithic tools, sharpeners and pebbles with traces of bone work stand out. Our research emphasizes the remarkable standardization and technical coherence evident within these toolkits, particularly discernible in the hunting and woodworking implements. This cohesion likely played a pivotal role in sustaining their maritime way of life and navigation practices.

Huidobro, Consuelo [282] see Soto, Victoria

Hull, Emily

[183]

Tame, Feral, and Pest Species: Plants and Animals at the Edges of Domestication and Human Control

We love to think that we are firmly in charge of our domestic spaces, and we love sharply delineated definitions. The designations of “wild” and “domestic” species speak to this; we define domestic species as those who have changed irrevocably under the reproductive control of humans. However, there are still species who exist in the spaces in-between: “tamed” wild animals living in human habitats and in cooperation with humans, feral plants and animals who are domesticates breaking away from human control, and pest species who live within and because of humans, but are unwelcome. Genetically and morphologically, however, pest species may be undergoing or have undergone genetic changes that we usually associate with domestic species. Likewise, feral animals often display behaviors and traits that we believe to have been “bred out” of them. This study the narratives around domestic species as well as domestication studies and studies of human- animal relationships to explore how the beings who live in the gray areas between wild and

domestic may reveal biases within domestication theories. Examining the life histories, paleopathology, and mobility of these species may have implications for how we interpret and approach their presence in assemblages and in human history.

Hulse, Eva [133] see Sarjeant, Carmen

Humberto Toledo, Jorge [273] see Murakami, Tatsuya

Humphreys, Stephen (American Veterans Archaeological Recovery) and Mackenze Burkhart (American Veterans Archaeological Recovery)

[324]

Leadership on the Battlefield: Lessons Learned from Eight Years of Systematic Metal Detection on Conflict Sites
American Veterans Archaeological Recovery (AVAR), an American 501c3 nonprofit that uses archaeological fieldwork to help military veterans transition into new lives and careers, has been participating in and directing metal detection surveys on conflict sites since the program's inception in 2016. This was done both to increase engagement through providing veterans with an opportunity to work in an environment they were uniquely qualified to understand, and because the physical and mental impact of metal detection survey was determined to meet AVAR's goal of assisting veterans. This presentation will provide comparative mental and physical health data demonstrating the benefits of metal detection survey, emphasizing the unique leadership and management tools AVAR has developed in order to promote morale and efficiency in veteran field crews undertaking this type of work.

Hundgell, Gemm-Jayne [154] see Spahr, Tim

Hunt, George [153] see Wagner, Mark

Hunter, Raymond (Brown University)

[328]

Terrace Construction and Use across Five Centuries at Ollantaytambo, Peru

Archaeologists are increasingly examining remains from the past, including durable landscape features such as terraces, earthen mounds, and seemingly "abandoned" sites, in terms that query not just their initial construction, but also ongoing use and reoccupation. In this paper, I present new research into the origins of dramatic terrace complexes built around the town of Ollantaytambo in Peru's Cusco region. Excavation data clarify the history of the construction of those fields: unlike similar terrace complexes in Peru and beyond, Ollantaytambo's fields were not built over an extended period. Rather, Ollantaytambo's fields were constructed during a relatively brief flurry of activity sponsored by the Inka state and functioned as a physical manifestation of Inka power. I conclude the paper by considering how the original values ascribed to those terraces by the Inka changed through use across subsequent centuries, including under Spanish colonial rule. While Ollantaytambo's fields were built by an imperial power, local farmers have subsequently used those fields to resist and subvert attempts at top-down control. I draw on this case study to suggest that Ollantaytambo's fields, and other similar earthen constructions, can be put to new purposes and ascribed new values depending on social context.

Huntley, Deborah (Tetra Tech Inc.), Michele Koons (Denver Museum of Nature & Science), Octavius Seowtewa (Zuni Cultural Resources Advisory Team), Ronnie Cachini (Zuni Cultural Resources Advisory Team) and Steve Nash (Denver Museum of Nature & Science)

[88]

Our World: Archaeologists and Zuni Knowledge Keepers Create a Shared Narrative of Life in the Mogollon Highlands

The Mogollon Highlands of west-central New Mexico, despite a flurry of archaeological activity in the mid-twentieth century, have long been treated by archaeologists as a cultural backwater of the American Southwest. Boundary zone, frontier, and crossroads are labels that most frequently are applied. However, these labels are incorrect and a product of deep-seated assumptions by archaeologists, as well as a lack of accessible research. Since 2015, the Denver Museum of Nature & Science has conducted pedestrian surveys around the town of Reserve, New Mexico, that demonstrate the incredibly rich history of the Mogollon Highlands. Data from these surveys is presented and interpreted here in collaboration with members of the Zuni Cultural Resource Assessment Team.

Huntley, Deborah [111] see Baxter, Erin

Huntley, Deborah [287] see Eckert, Suzanne

Huntley, Deborah [175] see Schaefer, Jonathan

Huntley, Deborah [269] see Turney, Kathryn

Huntley, Jillian (Griffith University), Brandi MacDonald (Archaeometry Laboratory, MURR), May Nango (Gundjeihmi Aboriginal Corporation), Djaykuk Djandomerr (Gundjeihmi Aboriginal Corporation) and Lynley Wallis (Gundjeihmi Aboriginal Corporation)

[42]

Composite Bone Black Kunwarddebim at Madjedbebe, the Alligator Rivers Regions, Northern Australia

Unusually saturated black pigment in the Kunwarddebim (rock art) at the northeastern end of the Madjedbebe rockshelter prompted an in situ analytic program of Raman and portable X-ray fluorescence spectrometry. Here described results suggest a complex paint recipe for this black paint: a mix of bone black, magnetite rich minerals, and some organic components. We discuss this composite paint recipe in the broader context of the Mirrar Traditional Owners' rich record of continuous occupation that stretches some 65,000 years back in time.

Hurcombe, Linda [112] see Oosterwijk, Barbara

Hurst, Kara

[8]

Consulting on Reburial Efforts

The Bureau of Reclamation is actively working within the foundations of its authorities to move beyond just regulatory compliance of the Native American Graves Protection and Repatriation Act (NAGPRA) to better support needs identified by Native American tribes, such as reburial of their ancestors. Published over 20 years ago, 43 CFR part 423 Public Conduct on Bureau of Reclamation Facilities, Lands, and Waterbodies, prohibits all human burials on Reclamation land. An effort started in 2020 to revise and update sections in 43 CFR part 423 afforded Reclamation the opportunity to improve the Memorials section §423.28 related to reburials, with a focus on consultation with Tribes. The proposed rule would address the circumstances of reburials for Tribal cultures and communities, especially where human remains of Native American ancestors are inadvertently discovered or were previously collected.

Hurst, Stance [86] see Speer, Charles

Hurst, Winston (Bohunk Inc.) and Fred Nials**[96]***Shaping the World and Running for Corn: Monumental Agriritual Landscapes in the Dry-Farm Belt of the Ancient Puebloan, Northern San Juan*

Newly available USGS lidar imagery has confirmed the reported existence, and greatly expanded the known extent, of ancient ritual and agricultural earthworks in the northern San Juan region. These findings are transforming our understanding of early Puebloan landscape manipulation, with large implications for Puebloan community organization and food production technology. The landscape-scale earthworks include (1) extended bermed swales or “roads” extending overland between localities; (2) looping road-like features resembling racetracks; and (3) vast, agricultural field systems visible as sprawling landscapes rippled by sets of parallel low ridges separated by broad swales. The roads and loops frequently occur in association with recognized great houses (community centers) and pass through the berm-swale field landscapes. Early stage investigations suggest a strong association with great houses and communities of the Chaco era (AD 1000s–1100s). We argue that the association between the bermed archaeological fields and roads reflects an ancient Puebloan ritual connection between running and agricultural productivity and discuss them as complementary features in unitary “agriritual” landscapes. This paper focuses on the roads as ritual landscape features. A separate paper by Nials and Hurst details and discusses the ridge-swale agricultural systems.

Hurst, Winston [310] see Nials, Fred

Huskey, Delphi (East Carolina University), Megan Perry (East Carolina University) and Robert Tykot (University of South Florida)**[68]***The Relationship between Isotopic Evidence of Childhood Diet and Childhood Rickets in a Nineteenth-Century Jordanian Bedouin Population*

The site of Tell Hisban offers a unique perspective on the history of metabolic disease among nineteenth-century Middle Eastern Bedouin populations. Compared to regional samples from the same period, Hisban has a high rate of childhood metabolic disease, including rickets. Many infants at the site died with active rickets, and analysis of interglobular dentin (IGD) in adult dentition identified adult survivors of childhood rickets. Vitamin D deficiency is typically linked to insufficient UVB radiation, while cultural or other biological risk factors can play important roles, particularly in an environment with adequate levels of sunlight. Here, we use stable isotope analysis ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) of incremental dentin samples from three adults with evidence of childhood rickets and three without to identify a relationship between childhood diet and weaning patterns and vitamin D deficiency. The isotopic evidence suggests any variation in diet and weaning practices was not linked to rickets. Understanding the weaning history and early childhood diet of adults who survived rickets in infancy can illuminate potential risk factors and provide comparative material for eventual isotopic analysis of individuals who did not survive rickets in infancy.

Hussey, R. (National Park Service)**[312]***The Cove Conundrum: Managing Culture, Nature, and Tourism in Cades Cove, Tennessee*

Cades Cove, located within the Great Smoky Mountains National Park, Tennessee, is the stage of competing interests related to contested historical narratives, natural landscapes, and increased tourism demands. Originally within the Cherokee ancestral homeland, the Cove witnessed Euro-American early nineteenth-century settlement, which reshaped the area. The Cove was transformed again in the early twentieth century through federal intervention that converted the Appalachian lived landscape into a romantic representation of nineteenth-century rustic mountain culture that endures today. In this talk, I discuss the ongoing cultural resource management initiatives of Cades Cove as its constructed landscape is reshaped by archaeological excavations, ecological restoration, tourism, and the voices of Indigenous and Euro-American descendant communities. On one hand, we contend with infrastructural changes to support the five million annual visitors and possibly restore a portion of the Cove to its pre-European state. On the other hand, current

archaeological efforts have the potential to elevate Native American cultural representation in the area, while current collaborations with descendant groups work to enhance and correct cultural representation and safeguard historic structures and cemeteries. Overall, this talk provides insight into the realities of cultural resource management within the federal service while highlighting initiatives to help resolve these contentions.

Huster, Angela (Chronicle Heritage)

[108]

Chair

Huster, Angela (Chronicle Heritage)

[175]

The Matlatzinca-Aztec City of Tlacotepec: Results of the Proyecto Arqueológico Tlacotepec/Tlacotepec Archaeological Project

In 1565, the Matlatzinca Pablo Ocelotl and the Nahua Alonso Gonzales appeared before a Spanish judge in lawsuit over lands in the community of Tlacotepec, in the Toluca Valley of Central Mexico. While describing the rise and fall of their families under Matlatzinca, Aztec, and Spanish rule, both swore their families were longtime residents of community. In 2023, the Proyecto Arqueológico Tlacotepec/Tlacotepec Archaeological Project conducted an intensive survey of the Postclassic Matlatzinca-Aztec site of Tlacotepec, focusing on evaluating the timing and degree of Triple Alliance control in an intermediate province of the empire. This poster presents preliminary survey results of the chronological and cultural affiliations of the site, its spatial extent, and intrasite patterning. The site has been occupied from Early Postclassic through the present, and the survey found materials associated with the Early Postclassic through early Spanish colonial periods. The material at the site is predominately Matlatzinca, with evidence for interaction with the Basin of Mexico limited to the end of the Late Postclassic, adding an additional page to Pablo and Alonso's story.

Huster, Angela [214] see Clayton, Sarah

Hutchings, Corey (Nunatsiavut Government) and Deirdre Elliott (Nunatsiavut Government)

[307]

Archaeological Research Trends in Nunatsiavut

Archaeological research in Nunatsiavut has benefited from past large-scale survey, testing, and excavation efforts that have served as the foundational bodies of work and knowledge on which subsequent projects have been built. These wide-ranging projects opened up innumerable new avenues of inquiry and for decades served as the framework that subsequent research expanded from or refined. However, recent trends in archaeological research in Nunatsiavut are cause for concern, especially in light of increasing development, visitor activities, and climate change pressures. We explore the possible causes for this shift and highlight critical areas of research in a plea for renewed interest in fieldwork in the region.

Hutchings, Corey [307] see Elliott, Deirdre

Hutchinson, Dale [201] see Magoon, Dane

Hutchinson, Vance, Norman Easton (Yukon University) and Ching Yi (Mavis) Chan

[49]

Taxonomy and Taphonomy of Beringian Flora and Fauna from the Southern Yukon-Alaska Borderlands with Reference to the Little John Site (KdVo-6), Yukon, Canada

The Southern Yukon-Alaska Borderlands (SY-AB) is geographically coincident with the southeastern extent of Pleistocene Beringia. This unglaciated land mass formed a unique refugium along the northwestern margins

of the Cordilleran ice cap to the east and south and the Brooks Range glacial mass to the north. This poster summarizes the currently known range of late Pleistocene flora and fauna within the SY-AB as revealed by lake core sediments, accidental recovery during the course of Alaska highway construction, and controlled excavations at the Little John site (KdVo-6), Yukon. Due to the paucity of rigorously excavated sites and subsequent analyses, regional perspectives of the late Pleistocene biota within the SY-AB are less defined than at the local level. This emphasizes the need for increased dedicated archaeological investigations of an area so important to understanding how and when humans arrived in and adapted to a new land.

Hutira, Johna (Dawson Solutions)

[98]

Periods: Out in the Open

For women discussing our menstruation cycles in the context of the workplace is a double-edged sword. I am a boomer. Back in the day we didn't talk about periods, or cramps, or heavy flow days because those conditions were weaponized against us by the patriarchy. Fast forward 40 years: the status of women in archaeology is amazingly good compared to other industries; however, the reluctance to discuss, and institute accommodations for, our "bad" days remains. The question of how we can normalize menstruation in the workplace is the topic of this poster.

Hutson, Scott (University of Kentucky)

[74]

Discussant

Hutson, Scott (University of Kentucky), Travis Stanton (University of California, Riverside), Audrey Rosen (University of Kentucky), José Francisco Osorio León (Instituto Nacional de Antropología e Historia) and Francisco Pérez Ruíz (Instituto Nacional de Antropología e Historia)

[303]

Money Grows on Trees: Arboricultural Proxies and Engendering Ancient Maya Finance

Among the Classic and Postclassic period Maya, cacao beans were one of the most common forms of currency. Ancient Maya art depicts this money, which grows on trees, as tribute in courtly scenes most often populated by men. Yet contact period ethnohistoric documents consistently attribute ownership of trees to women. While contemporary cacao groves are limited to the wetter southern Maya Lowlands and Pacific coast, geoarchaeological and archaeobotanical datasets have recently confirmed the cultivation of cacao in depressions in the drier Northern Lowlands. This paper uses Northern Lowland lidar data to explore the Classic period spatial relationship between domestic settlement and relic cacao groves and the Postclassic period relationship between rainfall and the size and configuration of plots of land that may have been used for arboriculture. The results invite consideration of how gender intertwined with state finance and market exchange.

Hyde, David (Western Colorado University) and Fred Valdez Jr. (University of Texas, Austin)

[213]

Preliminary Results of Ancient Maya Marketplace Investigations at La Milpa, Belize

With support from a National Science Foundation Grant, fieldwork was conducted at the Ancient Maya site of La Milpa, located in the northwest corner of the Three Rivers Region. Archaeological matrix samples were collected from three areas within La Milpa for soil analysis as a method for testing marketplace locations and perhaps related activities. Additionally, a series of test pit units were excavated across one of the sample areas to exam artifact distributions. This paper will provide a report on methods, locations, and preliminary results.

Hyde, David [284] see Baldner, Linnea

Hyde, David [286] see Godhardt, Ava

Hyde, Elisabeth (Brigham Young University)**[197]***3D Modeling in Excavation*

Photogrammetry and 3D Modeling are tools that are greatly underutilized in excavation. Yet, they are very helpful to archaeologists. There are both drawbacks and benefits to using 3D modeling. However, this study of features in southeastern Utah shows that the positives outweigh the negatives. Although they can be tricky and time consuming to generate, 3D models using photogrammetry can be used to digitally preserve sites, saving a complete representation of a site or feature for later study without having to find and dig up the feature again. Stratigraphy can be studied using a 3D model, for instance. Another use for a 3D model is to look at the feature from a different angle, to be able to see things from a new perspective. This is especially invaluable if a feature is difficult to get to.

Hyland, Corrie (University of Oxford), Amy Styring (University of Oxford), Rick Schulting (University of Oxford) and Andrzej Weber (University of Alberta)**[176]***Amino Acid-Specific Approaches to Radiocarbon Freshwater Reservoir Corrections***[WITHDRAWN]**

Hyland, Ethan [201] see Trujillo-Hassan, Daniela

Hynes, Mary (Illinois State Archaeological Survey)**[137]***Documentation: The “Other” Artifact*

An artifact without associated documentation has limited archaeological value. Yet the need or desire for analysts and authors to retain associated documentation beyond the deposit of artifacts commonly results in the failure to transmit this essential part of the collection to the repository where the artifacts live. With the increase of born-digital files, it becomes even more difficult to corral the various types and formats of documentation related to a project for curation, including analysis, email, messaging, or in-person conversations that may include decision-making processes or interpretations that affect a holistic understanding of the project. The hybrid nature of information mandates curation strategy that safeguards both paper and digital data for the future. This paper details how the Illinois State Archaeological Survey is using the recent reassessment and relocation of our 24,000 ft³ collections to a new facility to guide a parallel reassessment of associated project documentation. Our “project close-out” procedure provides a model for addressing gaps in knowledge and organizing site documentation to preserve the archaeological record for future researchers.

Iacobucci, Alec**[285]***AMFOrA: Computer Vision for Macroscopic Ceramic Fabric Analysis*

The prospect of using computer vision to aid or automate the production of archaeological data is not new to archaeology. Computer vision offers a number of advantages compared to traditional approaches to quantifying archaeological data, including replicability, precision without fatigue, and the ability to expand the size of datasets analyzed. The present research examines the adoption of an automated computer vision protocol for analyzing ceramics from surface surveys. The study of macroscopic elements of ceramic construction—namely, the quantification and measurement of temper, nonplastic additions to the raw clay—can produce a wealth of information that allows a nuanced interpretation of archaeological ceramics such as determination of origin or intended vessel use. This type of analysis has distinct potential for survey ceramics where years of surface wear and erosion preclude more common classifications such as form or surface treatment. Since the analysis software takes 2D scans as raw data, data generation is easily integrated into

current intensive survey methodologies. This research examines 800 sherds collected over multiple survey seasons throughout the area of Son Servera in Eastern Mallorca (Spain) through an open-source ceramic analysis package developed for Python to generate a deeper understanding of the Son Servera Landscape

Iannone, Gyles (Trent University)

[289]

An Introduction to the Comparative Urban Traditions Project, with Emphasis on the East and Southeast Asian Case Studies

The Comparative Urban Traditions project aims to rigorously explore pre-industrial cities and urban communities in all their complexity and diversity. Focusing on a set of archaeological case studies that are representative of a range of different time periods and geopolitical contexts, the approach is sensitive to both the social production and social construction of space. The similarities and differences that emerge through comparison of the morphological structure of different cities, assessment of the diverse services these centers provided, and consideration of the dynamic lived experiences of the multiplicity of residents and assorted visitors who constituted these urban communities, will not only contribute to a better understanding of the range of variation inherent in these expansive settlements, but also inform us as to the physical and social characteristics that they shared. This presentation will focus specifically on case studies from East and Southeast Asia.

Ibarra, Thania (Escuela Nacional de Conservación, Restauración y Museografía), Soledad Ortiz-Ruiz (Instituto de Investigaciones Antropológicas, UNAM), Oscar de Lucio (LANCIC-Instituto de Física, UNAM), Angel Góngora-Salas (Centro INAH-Yucatán) and Lilian García-Alonso (Escuela Nacional de Conservación, Restauración y Museografía)

[114]

La producción prehispánica de cal en la región de Ichkaantijoo, Yucatán, México: Caracterización de morteros por medio de ciencias de materiales aplicadas

En este estudio se caracterizaron pisos de cal arqueológicos de ocho sitios de la región de Ichkaantijoo, Yucatán, de distintas temporalidades (1000 aC-1300 dC) por medio de técnicas de ciencias de materiales, a fin de identificar los procesos de la producción artesanal prehispánica y reconocer las diferencias y similitudes en tiempo y espacio. El análisis se hizo por medio de FTIR, FORS, XRD, XRF y Petrografía. Los resultados muestran tres grupos de morteros de cal para los pisos, todos compuestos por carbonatos de calcio (CaCO₃), pero con distintos agregados. Proponemos que las diferentes huellas químicas y físicas de las muestras responden a distintos carbonatos de calcio y silico-aluminatos obtenidos de diferentes minas, ya que éstas son abundantes en la región. Los resultados muestran más variación en la composición y temperaturas de los morteros durante el periodo Clásico (250-1000 dC), indicando experimentación e innovación durante este tiempo. Asimismo, corroboramos el uso de carbonato de calcio geogénico en los pisos lo cual ha sido previamente reportado por Hansen (2000) en Guatemala.

Ibarra Arzave, Georgina [240] see Cabadas Báez, Héctor Victor

Ibarra Asencios, Bebel [81] see Nesbitt, Jason

Ibarra Asencios, Bebel [185] see Titelbaum, Anne

Ibarra López, Miguel Alberto [106] see Punzo Díaz, José Luis

Ibarra-Morales, Emilio [152] see McClung de Tapia, Emily

Ibarrola, Mary Elizabeth (University of Texas, Austin)**[227]***From Personal Amulets to Shared Rituals*

Since the inception of the field of Historical Archaeology, much has been made of the small finds interpreted as residues of African spiritual belief and ritual practice. Beads, X-marked fragments, and pierced coins, first the subject of the “search for Africanisms” that characterized American plantation archaeology, have since been examined as evidence of continuity and change in ritual practices, been used to trace specific links between diasporic communities and varied African cultures and religions, and have been highlighted for the idiosyncratic and highly interpretable nature of their creation and use. In this paper, I consider how we might extrapolate understandings of group dynamics, particularly the formation and functioning of community, from these objects. I examine small finds from several North Florida sites and consider how these objects might be used to study the communities in which they were produced, utilized, and discarded. I seek to use materials typically associated with individuals to think about communal ritual practices and the shared maintenance of spiritual communities.

Ichikawa, Akira (Kanazawa University)**[1]***Social Responses to Volcanic Eruptions: Comparative Studies in Central America and Japan*

Volcanic eruptions are hazardous events that affect past cultural and historical trajectories. However, despite several catastrophic eruptions having been recorded, some populations have chosen to continuously live in hazardous environments. Based on a long-term archaeological perspective, this paper shows human response, adaptation, resilience, creativity, and innovation in specific volcanic areas, such as Central America and Japan. These two comparative case studies highlight the importance of ritual practices as responses to unpredictable natural events and the creation of novel innovations by different social groups, as potential responses to volcanic disasters. Additionally, the data suggest that social and environmental turmoil caused by volcanic eruptions could have created an opportunity to reconsider existing social systems, beliefs, subsistence strategies, and technologies, triggering the emergence of new leaders who could manage social groups in the chaotic period. Finally, I present a case in which archaeological data and historical accounts contributed to the survival of recent human lives, demonstrating the potential for ancient disasters to inform the present.

Ichikawa, Akira [314] see Perry, Gabrielle

Iglesias, Christina (California State University, Los Angeles) and Ann Scott**[221]***A Two-Decade Assessment of Maya Cave Archaeology*

Twenty years ago, Ann Scott presented “The Historical Context of the Founding of Maya Cave Archaeology” at the SAA meetings in Montreal documenting the history of Maya cave archaeology from the 1970s to its emergence as a self-conscious field in 1997. It is fitting, therefore, that this presentation considers the expansion the field has undergone in the last two decades, its current state, and directions for the immediate future. Thematically, the investigation of the constructed subterranean and the interpretation of human skeletal material in caves appear to be two dominant directions that current research is taking while the analysis of speleothems may be an underdeveloped interest coming into its own. I see the field at a crossroads due to the lack of active cave surveys and few cave archaeologists still actively involved in field research. Scott’s original paper suggested that the beginning of her Foundation period in the 1980s was a generational transition. Now 40 years later, the field appears to be heralding a new dawn from survey to cave studies expanding to the subterranean.

Iiriti, Giovanni [46] see Chesson, Meredith

Iizuka, Fumie (University of Missouri), Masami Izuho (Tokyo Metropolitan University), Kazuki Morisaki (University of Tokyo), Junichiro Okita (Nishinoomote City Board of Education) and Mark Aldenderfer (University of California, Merced)

[42]

Evidence of Coastal Use by Foragers: Inferences from Pottery Petrography from Two Pleistocene Sites, Tanegashima Island, Japan

Tanegashima Island in the southernmost region of Japan has the earliest evidence of a large quantity of ceramic production by late Pleistocene foragers of eastern Eurasia. The island is also part of the southern Kyushu region, where the pottery-bearing occupation is found under well-dated tephra dated to ca. 12,800 cal BP, termed the Incipient Jomon. In our previous research based on visual and stereoscopic analyses of pottery from three sites and petrographic analysis combined with neutron activation study from a site suggested that pottery produced on the island had local raw material procurement signatures, in the vicinity of sites. In this study, we examined pottery thin sections from the Onigano and Okunonita sites, previously studied through visual analyses. Our results indicate that some pottery produced on the island has relatively rounded mineral and rock inclusions, that are more common in sediments near the coast. This study provides an insight that ceramic producers were users of resources relatively close to the paleo-coast, not just inland that had previously been hypothesized.

Iizuka, Fumie [306] see Davis, Loren

Iizuka, Yoshiyuki [86] see Wang, Kuan-Wen

Ikehara Tsukayama, Hugo (Metropolitan Museum of Art, NY), Marco Pfeiffer Jakob (Universidad de Chile), Josefina Concha O’Ryan (Independent Researcher), Michele Koons (Denver Museum of Nature & Science) and Lisa Trever (Columbia University)

[13]

Long-Term Geomorphological History and the Farming Landscape of Pañamarca

In this presentation, we discuss the results of the geomorphological survey carried out parallel to the archaeological fieldwork in 2018 and 2019. The analysis of geological profiles at alluvial terraces, satellite imagery, and radiocarbon dating produced a 9,000-year sequence showing the high dynamism of the Nepeña River through time, affecting the topography, distribution of resources, and ultimately the location of settlements. Finally, we will present a preliminary look at the agricultural landscape of the surroundings of Pañamarca during the first millennium CE.

Ikehara Tsukayama, Hugo [13] see Trever, Lisa

Infanzon Soriano, Debora [243] see Sanchez Garcia, Julio

Ingalls, Victoria (Acacia Heritage Consulting), Mara De Gregori (Texas Tech University) and Brett Houk (Texas Tech University)

[226]

Salvage Excavations of a Painted Maya Tomb at Ayiin Winik, Northwestern Belize

In 2023, the Belize Estates Archaeological Survey Team (BEAST) field assessed recently acquired lidar data. This effort included documenting a previously unknown large ceremonial center, Ayiin Winik, located between the La Lucha Escarpment and the Rio Bravo in northwestern Belize. Exploration of the site identified a rare double ballcourt, a parapet-lined sacbe, a large palace, a hilltop acropolis, several large altars, and stelae. At a large hilltop group south of the main plaza, team members identified a large looters’ tunnel that cut through the center of a large pyramidal structure, B-1. This tunnel exposed at least four major construction phases and vaulted rooms, along with ancient graffiti and a looted tomb. The tomb itself is a

vaulted room with cream-colored panels bordered by vertical red bars and a red band painted around the top of the chamber's wall. While the style of the painted tomb mimics the elaborate Early Classic tombs at Rio Azul, Ayiin Winik's tomb lacks painted glyphs and artistic designs. This paper presents and discusses the results of BEAST's salvage excavations to contextualize the tomb within the region's Early Classic period.

Ingram, Scott (Colorado College)

[36]

Climate and Human Behavior Studies for Our Warming World: An Introduction to the Models, Methods, and Data

This presentation provides a practical introduction and toolkit for investigating relationships between climate and human behavior. The urgency of addressing the problems of our warming world is beyond the responsibility or exclusive domain of climate scientists or specialist—it is a shared human responsibility. Public or scholarly contributions do not require specialized climate knowledge. Some foundational conceptual models, assumptions, methods, and data of climate and human behavior studies will be presented. The intent is to expand competence in this domain to enrich documentation and interpretations of the past so that insights will emerge to contribute to preparing for and responding to our warming world. While the North American Southwest is the geographical focus, the approach advanced is applicable in drylands worldwide.

Inomata, Takeshi (University of Arizona)

[56]

The Emergence of a Large Community at Aguada Fénix, Tabasco, Mexico, and Its Legacy

The site of Aguada Fénix features an artificial plateau, which measures 1,400 × 400 m horizontally and 10–15 m vertically. Nine causeways and corridors radiate from the plateau. These monumental constructions were built between 1050 and 750 BC. This building, discovered in 2017, turned out to be the largest and oldest monumental structure in the history of the area that is conventionally called the Maya lowlands. We do not have any evidence of marked social inequality. Aguada Fénix was built probably during the transitional period from mobile lifeways to more sedentary ones and from mixed subsistence practices to more intensive maize agriculture. Collective ceremonies and construction projects likely served to bring a large number of people together and to promote shared cultural values during this period of significant social change. Early community leaders in this region possibly provided templates for rulership in later periods, which continued to emphasize the elite control of astronomy, calendar, and public ritual.

Inomata, Takeshi [125] see Alvarado, Claudia

Inomata, Takeshi [125] see García Hernández, Melina

Inomata, Takeshi [125] see Mendez Bauer, Maria Belen

Inomata, Takeshi [125] see Pinzón, Flory

Inomata, Takeshi [125] see Triadan, Daniela

Inomata, Takeshi [125] see Vázquez López, Verónica

Iorga, Anastasia (Stony Brook University), Katheryn Twiss (Stony Brook University), Kathleen Wooton (Facility for Isotope Research and Student Training), Carrie Wright (Facility for Isotope Research and Student Training) and E. Troy Rasbury (Facility for Isotope Research and Student Training)

[36]

Boron Isotopes: A New Tool for Characterizing Wetland Use in the Past

Ethnographic and historical evidence shows that wetlands are highly variable environments, and humans exploit them in both spatially and seasonally specific ways. Reconstructing such patterned use with currently available archaeological methods is extraordinarily difficult or, in most cases, impossible. We have identified a promising new tool for precise interpretations of human (and animal) wetland use. Work done at the Facility for Isotope Research and Student Training at Stony Brook University has demonstrated that boron isotope

analysis can distinguish between saltwater and freshwater environments and thus between different locations within coastal wetlands. Moreover, as boron's isotopic composition is predictably related to environmental conditions like pH, it is an effective proxy for distinguishing between seasons, salinities, even the ends of a pond. This paper presents data on spatial and seasonal variation in boron isotopes taken on wetland taxa widely used by humans. We highlight the advantages of using boron isotopic analysis to investigate seasonally and spatially dependent subsistence and mobility strategies within past wetlands.

Iriarte, Jose, Heiko Prumers (German Archaeological Institute), Carla Jaimes Betancourt (University of Bonn) and Mark Robinson (University of Exeter)

[155]

Precolumbian Low-Density Urbanism in the Llanos de Moxos

This presentation summarizes archaeological and lidar data from the Casarabe culture (~500–1400 CE) in the Llanos de Mojós savannah and forest mosaic in southwest Amazonia. Lidar revealed a four-tiered settlement system that spread over 4,500 km² with large extensive sites reaching up to 315 ha and whose civic-ceremonial architecture exhibits stepped platforms, on top of which lie U-shaped structures, rectangular platform mounds and conical pyramids. These large, central sites, surrounded by concentric polygonal banks, connect to different ranked sites with raised causeways stretching over several kilometers. Massive water-management infrastructure, composed of canals and reservoirs, completes the settlement system of this engineered landscape. The Casarabe-culture settlement pattern represents a particular type of tropical low-density urbanism and land use not previously described in Amazonia that adds to the growing number of urban societies in tropical South America.

Iriarte, Jose [217] see Garay-Vazquez, J. Julian

Iriarte, Jose [112] see Oosterwijk, Barbara

Iriarte, Jose [36] see Osborn, Jo

Iriki, Atsushi [239] see Matsumoto, Naoko

Irmis, Randall [249] see Cole, Kasey

Irwin, Dan [173] see Herndon, Kelsey

Isaza, Ilean (Estacion Científica COIBA AIP; Smithsonian Tropical Research Institute)

[222]

Chair

Isaza, Ilean (Estacion Científica COIBA AIP; Smithsonian Tropical Research Institute) and Diana Carvajal Contreras (Estacion Científica COIBA AIP)

[222]

Between Fishing and Rites of Passage at Death: Recent Developments from Excavations at Jicarita Island, Coiba, Panama

A recent focus on insular areas has expanded our knowledge on the abundance and diversity of insular, coastal, and pelagic habitats harvested from ca. 6200 BP. Inspired by Richard Cooke's vision to explore the Coiba Archipelago, in 2023 the authors returned to Jicarita Island to investigate the techniques for processing Pisces and the fishing traditions among the ancestors of Quevi Cabo at a precolumbian fishery dating between cal 1290 and 1060 BP. The excavations of a domestic structure with its fireplace, presumably used for the preparation and drying of fish, included species that frequent clear water columns such as mackerel (*Decapterus macarellus*), black skipjack (*Euthynnus lineatus*), red snapper (*Lutjanus viridis*), and hogfish (*Balistes polylepis*), among others. The

fishery site also exposed the presence of two semiotic traditions at the height of its occupation and surficial burial features of non-elite individuals with scarce offerings, but ones that linked them to a maritime way of life. During the presentation the authors will address the relevance of this unique site in the context of emerging complex societies and focus on the current state of zooarchaeological and material analyses.

Isaza, Ilean [222] see Sharpe, Ashley

Iseminger, William (Cahokia Mounds)

[265]

Cahokia-Style Engraved Stone Tablets

The Cahokia Birdman Tablet is the iconic example of what defines this artifact category, with engraved graphics on the obverse and crosshatching on the reverse of a rectangular stone tablet. Other tablets from Mississippian contexts have similar combinations or variations of these three features. Some may only exhibit crosshatching on one or both sides. This study examines 40 examples of tablets, most that would qualify as Cahokia-Style with at least the rectangular form and either graphics or crosshatching, or some combination of those, while others are more “marginal” and a few “outliers” may include only one feature. The function of the tablets currently is unknown. About half have been recovered in excavations but not in contexts that imply function, with one possible exception. Most are made of sandstone or other abrasive stone, but they do not appear to be abraders, as the crosshatching grooves are usually uniform in depth and width, unlike the usual abraders that have tapering grooves in irregular patterns. Those with graphics may have a more ritual function while the others a more practical one.

Iseminger, William [154] see Boles, Steve

Isenbarger, Nicole (South Carolina Parks Recreation & Tourism)

[86]

Seventeenth-Century Clay Industries at ca. 1670 Charles Towne, Charleston, South Carolina

The restoration of Charles II to the English throne created a flourishing of economic growth, philosophical change, and a new focus on scientific experimentation in the English empire. The Carolina colony was founded in 1670 with the intent to create an ordered and profitable society for its colonists that was focused on agriculture and local industries within the colonies. This study targets specific examples that evidence clay as a source for and byproduct of 1670s industry, trade, and commerce that molded and shaped Carolina and its colonists, revealing information about the elite private property owners, indentured servants, and enslaved Africans that labored to transform Carolina into a successful colony. This study utilizes laser ablation–inductively coupled plasma–mass spectrometry (LA-ICP-MS) analyses on 146 samples from three distinct clay wares—kaolin tobacco pipes, redware, and colonoware pottery—recovered from contexts at the ca. 1670 town settlement. Here, we establish an elemental signature for future comparative studies and gain insight into English global and regional trade and commerce as well as the early local clay industries founded in the Carolina colony.

Iskanderova, Aysulu [42] see Apuzzo, Cassandra

Isla, Johnny [299] see Mader, Christian

Isla Alayo, Aleksalía [87] see Garvin Suero, Arianna

Itahashi, Yu [51] see Lin, Kuei-chen

Ivanov, Sergey [17] see Chang, Claudia

Ives, Brandon [42] see Pierce, Daniel

Iwaniszewski, Stanislaw (National School of Anthropology and History, Mexico)
[290]

Discussant

Iwashiro, Kuninori [239] see Goto, Akira

Iwashiro, Kuninori [239] see Sugiyama, Saburo

Ixta, Itzamara (Louisiana State University) and David Chicoine (Louisiana State University)
[286]

The Ancient Occupation of the East Terrace at Cerro San Isidro, Moro District, Peru

This poster reports on the results of archaeological excavations carried out at the ancient human settlement of Cerro San Isidro located in the Moro region of the middle Nepeña Valley, north central coast of Peru. In particular, we expose and analyze stratigraphic, architectural, and material data recovered in the unidad de excavación 5 (UE5) at the East Terrace (Terraza Este) in 2022. The East Terrace is one of several human-made flat areas perched on the slopes of the San Isidro hill where fieldwork since 2019 has revealed a rich and complex human occupation going back more than 2500 years ago. Through block excavations, UE5 sampled 125 m² and vertically exposed stratigraphic contexts with multiple superimposed occupational and architectural phases. Overall, the contextual information recovered, including the architectural organization, hearths, storage areas, food remains, animal dung, and other material remains, point to a series of multi-functional residential occupations over the long history of the East Terrace. Three radiocarbon measurements from the East Terrace point to a complex and intermittent occupation between 350 cal BCE and 1450 cal CE. We integrate the various strands of evidence into a discussion of the ancient occupation of the East Terrace.

Izuho, Masami (Tokyo Metropolitan University), Nicolas Zwyns (University of California, Davis), Katsuhiko Sano (Tohoku University) and Gunchinsuren Byambaa (Mongolian Academy of Sciences)

[281]

Excavation at an Early Upper Paleolithic Site of the Tarvagataiin Am, Northern Mongolia

While early modern human dispersals occurred in Northern Eurasia around ~45–40 ka ago, a cultural phenomenon often labeled as the Initial Upper Paleolithic (IUP) is identified in Central and Eastern Europe, but also in West, Central, and Northeast Asia. Despite significant progress in our understanding of the timing and routes of these population movements, the processes leading to the installment of modern human populations in Northern Eurasia remain unclear. Following the IUP, around 40–33 ka, archaeological assemblages broadly referred to as early Upper Paleolithic (EUP) show an increase in the number of regional variants probably reflecting a higher cultural diversity. Here we report the recent excavation of Tarvagataiin Am site in northern Mongolia. The site is situated in a terrace along the Khudel River, which is one of the tributaries of the Selenge River valley system. Artifacts are found from an alluvial sedimentary context of bedded fine sand and sandy-silt, 145 cm below the ground surface. The low energy deposition of the site matrix accumulated in an alluvial context, thereby suggesting that the site has a high potential both for precise geochronological control and for a good preservation of human activities.

Izuho, Masami [42] see Iizuka, Fumie

Izuho, Masami [306] see Davis, Loren

Jackson, Kendal [232] see Pluckhahn, Thomas

Jackson, Misty (Arbre Croche Cultural Resources)

[65]

Discussant

Jacobs, Nicholas, Hope Loisel (University of Washington), Alexandra Fraik (US Forest Service Rocky Mountain Research Station), Ross Salerno (US Geological Survey) and Molly Carney (Oregon State University)

[87]

Drawing from the Past to Inform the Future: Exploring 500 Years of Skagit River Salmonidae Abundance
Recovery plans and goals for Pacific northwest salmon, trout, and char (*Oncorhynchus* spp., Salmonidae) seek to conserve and restore these keystone species throughout the Salish Sea and its watersheds. Archaeological data offer a window into past Salmonidae life-histories and can provide a long-term record of the species and their relative abundance for conservation practitioners. In this paper we examine the archaeological record of Salmonidae abundance within the Tronsdal site on the Skagit River delta, Washington State, as part of our larger efforts to reconstruct Salmonidae life-histories for restoration. We calculate the ratio of the Salmonidae number of identifiable specimens (NISP) to the number of all fish remains within each temporal context (NISP Salmonid / N All Fish) to examine change in abundance through time. Our data reflects a trend of fluctuating Salmonid abundance—early levels show high or increasing abundance, followed by a sharp decline and subsequent increase. Although abundance is one criterion within the Viable Salmonid Populations parameters used across Puget Sound to monitor and restore healthy salmon populations, this index will allow a longer-term baseline for ecological restoration efforts for rights-holders throughout the Skagit River watershed and contribute to baselines across the Salish Sea.

Jacobsen, Casper

[21]

“To Kill” or “To Sacrifice?” Sahagún and the Translation of Mortal Violence

Spanish accounts from sixteenth-century colonial New Spain tell us that the Aztecs “sacrificed” humans, a notion that has been corroborated and expanded by scholars from a variety of disciplinary perspectives, including archaeology, anthropology, history, and religious studies. One question that has tended to escape critical scrutiny is whether a corresponding semantics of “sacrificial” killing may be found in accounts written in the Aztec language Nahuatl or whether the notion of Aztec human sacrifice should rather be seen as a figment of Spanish colonial translation. To explore this issue, I examine narratives of Aztec as well as of Spanish mortal violence in the Franciscan missionary Bernardino de Sahagún’s book on the conquest. As I show, a comparison of the Nahuatl texts with the Spanish translations illuminates how missionary translation practices augmented the semantics of “sacrifice,” creating a conceptual distinction between Aztec and Spanish mortal violence that is absent in the Nahuatl source language.

Jacobsen, Casper

[59]

Chair

Jacobson, Jodi (Center for Archaeological Studies, Texas State University)

[66]

Discussant

Jacobson, Jodi (Center for Archaeological Studies, Texas State University) and James Ramsey (Wyoming State Parks)**[200]***Beyond Consumption: Evidence for Animal Bone Use in Music, Art, and Ritual in Texas*

Animal bone was utilized for more than subsistence purposes. Most non-subsistence use has been focused on utilitarian tools. Bone-use beyond subsistence and utilitarian tool use is rarely identified or considered for its cultural impact or implications. Often it is difficult to identify in the archaeological record, and is frequently overlooked, with its functionality beyond subsistence ignored within Texas archaeological assemblages. Faunal material from two sites in Dallas County, Texas (4IDL433 and 4IDL434) are compared and contrasted. The two sites are in close proximity and may represent concurrent usage and a cultural association to each other. Findings of the faunal analysis are discussed and the data indicating connections to non-subsistence activities including ritual, music, and art presented.

Jacquier, Jérémie [219] see Naudinot, Nicolas

Jaffe, Yitzchak (University of Haifa)**[132]***Chair***Jaffe, Yitzchak (University of Haifa)****[132]***An Introduction to Failure in the Archaeological Record*

Archaeological theory has engaged little with failures, at least at certain scales. In this introduction, we attempt to lay out issues with the anthropological definition of failure while also drawing attention to issues of scale. While archaeologists readily identify “Big F” failures, such as social collapse and site abandonment, they less frequently consider “small f” failures (mistakes and blunders) that plague the everyday. How can we reinsert failure into “trowel’s edge” interpretations? Not doing so, we argue, has serious consequences for appreciating the humanity of past peoples.

Jaimes Betancourt, Carla (University of Bonn) and Patricia Ayala (University of Chile)**[124]***Heritage and Territoriality: Past, Present, and Future Perceptions among the Tacana, Tsimane, and Mosestén in Bolivia*

Preliminary results of the collaborative methodologies applied in two years of intense fieldwork in the Bolivian Amazon will be presented, and we will reflect on the different roles played by archaeological and sacred sites in the Tsimane, Mosestén, and Tacana indigenous territories. Furthermore, we consider how materiality is a permanent link between the past and the present and manifests the cultural continuities existing among some of these same actors. A central aspect of the project lies in its collective, holistic, and transdisciplinary approach, which fosters an ontological dialogue between local Indigenous communal researchers and Western cultural and natural heritage specialists (such as archaeologists, anthropologists, biologists, and museologists). In its broader implications, the research aims to contribute to a critical approach of heritage and its reconceptualization through cross-cultural dialogues, creating new theoretical frameworks for heritage conservation, protection, museumization, and dissemination at local, national, and global scales. Recognizing the dynamic nature of heritage processes, the project acknowledges their social, political, and economic ramifications among all societies involved.

Jaimes Betancourt, Carla (University of Bonn)**[243]***Discussant*

Jaimes Betancourt, Carla [155] see Iriarte, Jose

Jalandoni, Andrea (Griffith University)**[112]***State of the Art: Digital Methods for Rock Art Research in 2024*

Rock art is under constant threat from natural and anthropogenic deterioration and one of the challenges for archaeologists is to document and study this invaluable heritage before it disappears. Digital archaeology, the use of information technology and digital media for archaeological research, is essential for recording, analyzing and envisioning rock art to meet this challenge. Digital methods, such as 3D modeling and DStretch (decorrelation stretch), are already becoming standard because they produce more accurate recordings and are more cost-effective than traditional methods. Furthermore, there have been significant innovations in rock art research through assimilating methods from other disciplines (e.g., GIS, data science, and remote sensing) and using data collected from rock art sites in Australia, Southeast Asia, and the Pacific. These advances have not only improved research potential but have also helped Indigenous and non-Indigenous people to engage with their cultural heritage more tangibly.

Jalbert, Catherine (Terracon Consultants Inc.) and John Hall (Terracon Consultants Inc.)**[43]***Wooden Features on the Jicarilla Apache Nation: An Analysis of Navajo and Apache Land Use*

The Jicarilla Apache Nation (JAN) reservation was established in Northern New Mexico in 1887 with additional lands added to the southern boundary in 1907–1908. Today, the reservation comprises approximately 879,917 acres of pinyon-juniper uplands and sagebrush flats in lower elevations. Prior to the establishment of the JAN reservation, these lands comprised a portion of the Dinéyah homelands; archaeological evidence of early habitation by ancestral Navajo and earlier Paleoindian, Archaic, and Puebloan ancestors is present throughout the landscape. While minimal structural remnants are encountered for earlier periods, ubiquitous wooden features demonstrate the diversification of animal husbandry practices in the period after the Pueblo Revolt. These features range from large-scale traps to smaller corral and pens representing cultural and socioeconomic shifts from communal hunting to majority pastoralism of herd animals post-1868. Using extant data from the New Mexico Cultural Resources Information System (NMCRIS) and the JAN Tribal Historic Preservation Office (THPO), this poster will present an aggregated analysis of archaeological sites containing wooden features within JAN reservation lands (1887–1908). This will include a comparison to similar features identified in adjacent regions and a discussion of salient issues in refining use history when land-use, repair/modification, and wood salvaging behaviors are considered.

Jalbert, Catherine [43] see Kimbell, Jennifer

James, Madisen [268] see Carmody, Stephen

James, Madison [257] see Blake, Asher

James, Ronald [231] see Cannon, Kenneth

James, Sydney (Arizona State University)**[150]***Archaeology for the Land: The Potential of Community-Based Archaeology for Land Stewardship*

When archaeologists are community focused and projects are community oriented, archaeology possesses the capability to go beyond data collection for the sake of academic research. Successful community-based participatory archaeological research has yielded a range of results—from raising public awareness of local history, to implementing outreach education programs, to connecting stakeholder groups, and even so far as to boost local tourism economies. This list is not exhaustive. Community-based archaeology, when

implemented properly, has demonstrated benefits for communities and archaeologists alike and still has potential to go farther. The SAA maintains that archaeologists are stewards of the archaeological record—but for whom? Indigenous communities in the United States and elsewhere have long been some of the best stewards of their lands, both culturally and environmentally. As a result of the impacts of colonialism, however, much of that traditional knowledge has been ignored or lost. Community-based participatory archaeology holds the unique potential to serve stakeholder communities by recovering knowledge. It may also serve to advocate for land rights and the implementation of traditional ecological knowledge (TEK) on a larger scale. This talk will explore the potential of community-based archaeology for land stewardship for Indigenous groups in the United States and beyond.

Jamieson, Zachariah

[332]

Quantifying Earth Oven Fire-Cracked Rock: A View from the Langtry Rock Midden

This paper highlights quantification data from the author's thesis, including the methodology of 33 archaeological excavations in the Edwards Plateau and Lower Pecos Canyonlands in which fire-cracked rock (FCR) quantification attempts were made. My excavations at Langtry Rock Midden (41VV168) were conducted to provide a well-documented FCR quantification dataset for comparative study. LRM is an earth oven facility on the Canyon Edge overlooking Eagle Nest Canyon. Radiocarbon dates place main midden accumulation during the Late Archaic and Late Prehistoric, BP 1650–1019. I used Rock Sort, an FCR quantification routine developed by the Ancient Southwest Texas Project, to document the LRM deposits and compare FCR data with those from other Eagle Nest Canyon sites. Rock Sort is a consistent FCR measurement methodology that permits a rigorous approach derived from prior experiments and studies. It incorporates the three pillars of quantification: size-class sorting, counting, and weighing to calculate volume, density, and mass, as well as FCR morphology to estimate how many earth ovens were constructed at the burned rock midden (BRM).

Jamsranjav, Bayarsaikhan [199] see Densel, Allison

Jamsranjav, Bayarsaikhan [23] see Hart, Isaac

Janesko, Sarah

[196]

Moderator

Jani, Gargi [105] see Belcher, William

Jankiewicz, Stephen (Argonne National Laboratory), Jennifer Abplanalp (Argonne National Laboratory), Conner Wiktorowicz (Argonne National Laboratory), Alison Rubio (Air Force Civil Engineer Center) and Ilaria Harrach Harcourt (Air Force Civil Engineer Center)

[270]

Advances in Strategic Cultural Resources Support from the Air Force Civil Engineer Center and Argonne National Laboratory

Argonne National Laboratory supports the Air Force Civil Engineer Center in implementing comprehensive cultural resources management at several Department of the Air Force installations in the southeastern United States. The Southeast is experiencing extreme weather events more frequently, presenting opportunities for improved methodologies and solutions for preserving important cultural resources in the region. Coastal cultural resources are especially vulnerable to erosion, inundation, storm surges, high force winds, and sea-level rise, highlighting a vital need for updated and localized strategic planning. Overcoming these challenges also requires adaptive approaches for mitigating climate-driven adverse effects on cultural resources. Argonne supports a variety of projects in the region, including state-of-the-art coastal risk

modeling that leverages the latest Earth sciences research at Argonne, living shoreline construction, and 3D laser scanning all aimed at mitigating imminent climate effects on cultural resources, as well as tribal consultation, archaeological investigations, and digital curation, which are more focused on long-term strategic planning. These efforts support regulatory compliance and safeguard future public engagement with critically threatened cultural resources managed by the Air Force.

Jankiewicz, Stephen [127] see Pestle, William

Jankovic, Ivor [247] see Ahern, James

Jankovic, Ivor (Institute for Anthropological Research, Zagreb, Croatia)

[247]

Chair

Jankovic, Ivor (Institute for Anthropological Research, Zagreb, Croatia)

[247]

Integrating Neanderthal Legacy: From Past to Present

In 2020, a four-year Action, entitled Integrating Neanderthal Legacy: From Past to Present (iNEAL) (CA19141) financed through the European Cooperation in Science and Technology (COST), started. The Action is aimed at assessing and addressing biases in Neanderthal legacy and creating a pan-European (and wider) network of scholars involved in Neanderthal research. The ever-growing datasets related to Neanderthals (archaeological, fossil, genomic, etc.) resulted in specialization of scientists of different disciplines that often have less than adequate understanding of other fields involved with Neanderthal research. Further, socioeconomic factors and different trajectories of development of scientific disciplines in different countries resulted in biases toward the “Western countries,” while many of the sites in e.g., former “Eastern bloc” were poorly represented or published. The iNEAL Action is addressing these (and other) biases through its working groups (WG1: the fossil data; WG2: Cultural data; WG3: Molecular data; WG4: From past to present). Special attention is given to training of young researchers where disciplines are underdeveloped. Further, among the Action goals is bridging the gap between scientists and other interested parties (general public, touristic sector, museums, business, legislators, etc.) in order to utilize socioeconomic aspects of various types of Neanderthal legacy.

Jankovic, Ivor [247] see Vidas, Lia

Jankovic, Jonah

[255]

Evidence of Painted Mimbres Ceramic Production Patterns in the Sapillo Valley from the Analysis of Lake Roberts Vista Site Painted Sherd Collection

This presentation discusses the findings of a project investigating ceramic production in a hinterland of the Mimbres region, from a diachronic view across painted ware types. The Sapillo Creek Valley is a volcanic upland in southwestern New Mexico between the Mimbres and Gila River Valley culture-centers. The painted pottery recovered in 1995 from Lake Roberts Vista, a medium-sized Mimbres-Mogollon pithouse and pueblo habitation site, represents the full occupation timeframe (550–1130 CE). Sample sets of painted ceramic tempers from Lake Roberts Vista and alluvial sands from side drainages in the Sapillo Valley were analyzed by petrographic mineral characterization under low-power optical microscopy and X-ray diffraction. Combined, these methods provided technologically and cost-accessible implementable data. A comparison of the mineral datasets was used to point to answers regarding where local Mimbres potters obtained temper raw materials, likely production loci, Lake Roberts Vista’s level of on-site production, and changes in these patterns across time. My results highlighted drainage groups concentrated around large sites as likely temper sources utilized by local Mimbres potters. Locational shifts over time were noted, generally following site

growth/decline patterns. The tested ceramics paint a picture of an active distribution network within the valley and acquisition from outside.

Jansen, Amelia [200] see Elder, Jason

Jansen, Maarten (Rheinische Friedrich-Wilhelms Universität Bonn; Leiden University) and Gabina Perez (Independent)

[59]

Killing and Sacrifice in the Precolonial Codices

Human sacrifice and cannibalism are hallmarks of colonial discourse, which was developed to justify the conquest of the Americas. Particularly Aztec worldview has been presented consistently as pivoting on human sacrifices to “bloodthirsty devils” (in terminology of the conquerors). Eyewitness accounts are conspicuously scarce, but this paradigm dominates most historical written sources of the colonial period as from the first records (e.g., Cortés) and was later further elaborated in retrospect by the Spanish missionaries (e.g., Sahagún). Consequently, many archaeological remains and ancient images are perceived through this lens, often without scrutinizing the evidence and without searching alternative possibilities of interpretation. Clearly, there existed ritualized forms of death penalty for criminals and enemies (e.g., by stabbing them in the chest), but how many of those may be termed “sacrifices”? The ancient cultures gave special funerary treatments to bodily remains, but to what extent do these indicate “sacrifices” rather than worship of ancestral relics? Decolonial theory and Indigenous Methodologies stress the importance of discrimination-free language and thought. In an effort to deconstruct and elucidate the issue, this paper will examine relevant scenes from precolonial Mexican pictographic codices and compare them to colonial accounts.

Janzen, Anneke (Max Planck Institute for the Science of Human History) and Kristine Martirosyan-Olshansky

[215]

Neolithic Pastoralist Practices at Masis Blur, Armenia’s Ararat Valley

Neolithic settlements appeared across the Southern Caucasus in the early sixth millennium BCE. Ongoing excavations, along with zooarchaeological and isotopic research, are clarifying how these communities used the landscape and managed livestock in the context of mixed farming. In this paper we present new zooarchaeological data from recent excavations, in conjunction with stable carbon ($\delta^{13}\text{C}$) and nitrogen ($\delta^{15}\text{N}$) isotope analysis of bone collagen and stable carbon and oxygen ($\delta^{18}\text{O}$) isotope analysis of sequentially sampled tooth enamel from livestock from Masis Blur, one of the earliest Neolithic sites in the Southern Caucasus. Our results indicate that the occupants of Masis Blur engaged in a predominantly caprine-based herding economy, which depended on seasonal mobility to high-elevation pastures in the summers. These seasonal strategies were in place in the earliest known phases of occupation at Masis Blur and demonstrate sustained linkages between highland and lowland regions in the Ararat Valley in the early sixth millennium BCE. Finally, we also highlight how these data illuminate the diversity of herding strategies in the region more broadly.

Jarman, Cat [233] see Kassadjikova, Kalina

Jary Rosser, Pamela [192] see Lindley, Tiffany

Jasper, Kathryn (Illinois State University)**[22]***Mapping Agricultural Landscapes in Roman and Post-Roman Italy*

In the context of an archaeological excavation in northern Lazio, Italy, this paper will discuss solutions for incomplete datasets in the study of premodern agriculture. The focus of excavation is a Roman imperial period, monumental fountain located 300 m from the western coast of Lake Bolsena in central Italy. Its high quality of construction and materials and its remote rural location suggests the fountain was part of a larger complex, likely a Roman villa. Answering questions about the identity and motivations of the fountain's patron hinges on uncovering how its construction related to the agrarian economy, to local export and import and consumption of goods in the region. Reconstructing premodern agriculture is nearly impossible because it inevitably depends on incomplete datasets; but theoretical models are possible. The presentation speaks to the value of adopting a digital praxis to the study of historical source materials and turning sources into data. My approach blends analysis of historical documents with modern datasets of the physical environment, when relevant, to generate hypothetical ancient and medieval landscapes and practices in GIS databases for analysis.

Jazwa, Christopher (University of Nevada, Reno), Aomar Akerraz (Institut National des Sciences de l'Archéologie), Stephen Collins-Elliott (University of Tennessee Knoxville), Katelin McCullough (Hollins University) and Katie Tardio (Bucknell University)**[95]***Mauretanian and Roman Settlement Chronology in the Loukkos Valley, Northern Morocco*

Archaeological understanding of the chronology of pre-Roman and Roman occupation of northern Morocco has typically been determined by datable materials from large urban sites. We expand the scope to include smaller sites in the Loukkos River Valley near present-day Larache to investigate the understudied lives of rural populations in Roman North Africa. These sites are associated with the major site of Lixus, which was an important urban center as early as the eighth century BCE. We use radiocarbon dates and datable ceramics from four smaller sites, AC106 (HESP46), Sidi Moulay Abdeslam (HESP17), LA21 (HESP51), and Koudiat Hmamou (LA43/HESP23), in the hinterland surrounding Lixus to better understand local settlement patterns. Preliminary radiocarbon dates indicate occupation extended from at least 180–40 BCE (95.4% range) to 430–580 CE (95.4% range), with the greatest concentration of dates from the first to third centuries CE. This is consistent with the most intensive periods of occupation at Lixus. Radiocarbon dates, along with ceramic chronologies, allow us to refine the chronology of construction and expansion of these smaller hinterland sites. By investigating smaller sites, we are able to better understand the nature of Roman expansion into Morocco, particularly the settlement of river valleys outside major urban centers.

Jazwa, Christopher [272] see Best, Kaleigh

Jazwa, Christopher [138] see Rosencrance, Richard

Jeffreys, Jordan [72] see Lindler, Joseph

Jelinek, Lauren (Bureau of Reclamation)**[297]***Chair***Jelinek, Lauren (Bureau of Reclamation) and Kelly Jenks (New Mexico State University)****[297]***Making Invisible Labor Visible: The Invaluable Contributions of Mentors*

Mentorship plays a critical role in preparing new archaeologists for their future careers. Often dismissed as trivial compared to other roles such as project management or program development, it constitutes a long-term investment in the future of the individual, their specialty, their organization, and the profession as a

whole. Mentors provide aspiring professionals with opportunities to gain practical experience that often cannot be simulated in a lecture hall or field school. Furthermore, mentorship is integral to the development of problem-solving and conflict-resolution skills. Terry Majewski transcended her role as an academic mentor, providing guidance in managing the challenges that arise in heritage management, relationship building, the publication process, and professional service. Through her excellent mentorship, she encouraged others to become mentors themselves.

Jelinek, Lauren [297] see Jenks, Kelly

Jenkins, Dennis [87] see McDonough, Katelyn

Jenkins, Jessica [229] see Napora, Katharine

Jenkins, Kevin [307] see Pinta, Elie

Jenks, Kelly (New Mexico State University)
[297]
Chair

Jenks, Kelly (New Mexico State University) and Lauren Jelinek (Bureau of Reclamation)
[297]

Bridging the Divide between Industry and Educators: Preparing Future Archaeologists

Preparing students to work in heritage management is a difficult and increasingly urgent task. Some of the biggest challenges faced by educators include large student-to-teacher ratios, the logistical demands of transporting students to and from project areas, the expense of purchasing and maintaining appropriate equipment and software licenses, and the time and effort required to supervise students and comply with reporting requirements. Students desperately need real field and technical writing experience to be effective in this industry. Additionally, the industry as a whole needs more qualified archaeologists to meet growing demand. One potential solution to some of these challenges is for universities to partner with land-managing agencies on survey and site recording projects. This paper describes previous and ongoing efforts to work with federal, state, and municipal partners on projects that train students in the practice of heritage management.

Jenks, Kelly [206] see Guskey, Tanner

Jenks, Kelly [297] see Jelinek, Lauren

Jennings, Justin (Royal Ontario Museum)
[56]
Chair

Jennings, Justin (Royal Ontario Museum)
[248]

Kin, Ancestors, and Commensality: A New Vision for Huari Urbanism in Middle Horizon Peru (600–1000 CE)

Home to as many as 70,000 residents at its height, Huari was the largest city in the precolumbian Andes. The city's organization, however, has long perplexed scholars. There is abundance evidence for wealth and significant social stratification, alongside displays of violence and power. Yet, researchers have yet to find large plazas, broad avenues, a ruler's palace, a main temple, specialized production centers, or any of the other indications of centralized planning and control that are the anchoring features in most Mesoamerican

and Andean cities. In a word, Huari looks like a mess, especially during its first centuries. In this paper, I argue for a new model of Huari urbanism based on commensality. The importance of feasting in Andean politics is well-recognized and Wari governance appears to have been based on the shared preparation and consumption of large amounts of food and drink among a few people. Politics were ritually charged and ancestor-centered, predominately taking place within D-shaped temples and the internal patios of elite residences that could only fit a couple dozen people. Huari, in essence, was forged one party at a time, created in a cacophony of intimate meals hosted by competing elite.

Jennings, Justin [175] see Bautista, Stefanie

Jennings, Madeline, Miriam Belmaker (University of Tulsa) and Laura Stelson [268]

Zooarchaeological Evidence for Early Human Subsistence Patterns during the Precontact Occupation of Amalik Bay, Alaska

Limited research has been done concerning the zooarchaeological evidence for specific subsistence patterns of Amalik Bay, Alaska. Excavation and survey of the Amalik Bay, Alaska, conducted in 2008, 2021, and 2022 recovered faunal remains associated with cultural materials from sites XMK-00020, XMK-00028, and XMK-00001 thought to have origins in the Takli Cottonwood phase (1800–1500 BP). Of note are multiple bone tools produced on antler. Remains were identified to the lowest taxonomic level possible and taphonomic postdepositional modifications were recorded using the comparative zooarchaeological and paleoecological collection at the University of Tulsa. A selection of samples of these materials were taken for ¹⁴C dating, to be included in the results. Zooarchaeological results indicate that faunal materials consist of a range of species, both terrestrial and marine, in a variety of taphonomic degrees of preservation. Specifically, human utilization and consumption included a high percentage of medium size waterfowl (supported as integral by past research for 7500–4100 BP), caribou and seals. These results shed light on bone utilization and subsistence patterns within these Alaskan residential sites.

Jennings, Thomas (University of Louisville), Cenetria Crockett (University of Louisville) and Ashley Smallwood (University of Louisville) [72]

Collaboratively Creating a Digital Collection Database

Digital curation has become a critical component of a method of archaeological collection management, and UofL's CACHE recently received an NEH Foundation grant to develop a collection database. Digital curation helps collection managers organize and preserve collection records, monitor artifact conditions, and promote accessibility. Digital databases are vital; however, they are not directly addressed in 36CFR79, NAGPRA, or other curation laws. Therefore, we will be collaboratively building a database in partnership with digital curation experts, the Eastern Band of Cherokee Indians, and Louisville African American community members. We present collaboration goals and preliminary results of a survey we are using to guide database development.

Jennings, Thomas [82] see Smallwood, Ashley

Jensen, Anne (University of Alaska, Fairbanks; Bryn Mawr College) [307]

Cultural Heritage Management on Alaska's North Slope: Navigating without a Map in a Time of Rapid Change
Management of, and research on, cultural heritage in the Alaskan Arctic has changed significantly. The changes were much needed and long overdue, but they have brought new challenges to all parties. Accelerating permafrost degradation and coastal erosion have made traditional management strategies no longer viable. More clearly needs to be done to create a path forward that works for all concerned parties, especially descendant communities and local heritage centers. This paper looks at some of those challenges and

suggests possible ways forward that might lead to stronger collaboration between researchers and descendant communities (as opposed to mere box-ticking consultations) and true co-management of cultural heritage.

Jensen, Ethan (University of Nebraska, Lincoln) and Heather Richards-Rissetto (University of Nebraska, Lincoln)

[148]

Overview of a Photogrammetry / Map-Stories Approach to Heritage Management on Barbuda

Archaeological sites on the island of Barbuda are increasingly under threat from natural disasters and human practices. Photogrammetry is a promising tool to preserve detailed spatial data of threatened sites for future study and present sites to both researchers and the public using technologies such as virtual reality (VR) and augmented reality (AR) that offer a more intuitive and embodied experience than traditional media. During the 2023 field season, photogrammetric models of 10 sites on Barbuda were created. Seven of these sites are of the colonial era and include military fortifications, administrative buildings, and industrial sites, two are from the Archaic time period and consist of an opportunistic stratigraphic excavation of the Strombus Line (a shellfish midden) and a petroglyph in a cave, and one is modern and consists of a corrugated metal shelter on a wharf. These models were then incorporated into web-based AR and VR exhibits, and one was 3D printed. This presentation reports on the process and outcomes of these modeling projects, including technical obstacles, broader impacts, potential uses, limitations, and ethical considerations, as well as how this project highlights the need to apply the historical approach to digitally mediated archaeology, as advocated by Richards-Rissetto and Lindaut.

Jensen, Ethan [148] see Richards-Rissetto, Heather

Jensen, Matthew (Utah State University) and Jacob Freeman (Utah State University)

[107]

Does Political Organization Impact the Severity of Population Recession?

A critical question raised by 20 years of intensive archaeological research is: What processes drive the long-term expansion and rapid recession of human populations? In this poster, we test the hypothesis that variation in the violence of long-term population expansion and recession is caused by differences in the scale and inclusiveness of social and political integration. To test this hypothesis, we compare the population dynamics of case studies in Mesoamerica, the US Southwest/Northern Mexico, and eastern North America. We use large datasets of archaeological radiocarbon, estimates of resource production, and estimates of changes in public architecture to study the impact of political integration versus resource production on human population. This work allows us to test a general tradeoff between political integration that fuels short to medium term population growth but sets population systems up for population overshoots and decline.

Jepsen, Ana [174] see McCaig, Haley

Jeremiah, Kristen (Public Archaeology Laboratory Inc. [PAL])

[187]

Cultural Continuity in Southeastern New England: The Cultural Landscape of the Pokonoket Sites

Recent CRM investigations have shed new light on an area known to be an extensive Native American home site and cultural gathering place spanning back thousands of years to present day. The Pokonoket Cornfield Site in Dighton, Massachusetts, was first recorded in 1939 by avocational archaeologists who described it as being “a large habitation site of indefinite size.” Diagnostic artifacts suggested the site was occupied at least during the Late Woodland and Contact periods. Along the edge of the cornfield, a large oak tree known as “the Council Oak” is known to have been a seventeenth-century meeting location for King Philip (Metacom)

and his Wampanoag warriors during the King Philip's War (1675–1676). Investigations conducted within the site and surrounding vicinity by the Public Archaeology Laboratory Inc. (PAL) for a proposed transmission line project recovered evidence to suggest an earlier occupation of the Pokonoket Cornfield site as well as a Middle Archaic occupation of an adjacent hilltop, designated the Pokonoket Hilltop site. New data from the Pokonoket Hilltop and Pokonoket Cornfield sites contribute to the extensive record of Native American occupation of the Taunton River drainage basin dating back at least 8,000 years to the present day.

Jerrems, William

[316]

Lake Lahontan: A Pleistocene Pluvial Lake in the Northwest Great Basin: Paleoenvironments and the Archaeological Record

Israel Russell in 1883 suggested that the shorelines of ancient Lake Lahontan were so pristine that the lake must have been only a few hundred years old. Today it is known that this spectacular Pleistocene Lake, present in a unique environment, has been around for at least the last two million years with an extraordinarily complex history. Increasing evidence of human entrance into the Northwest as early as 14,000 to 18,000 BP, following the Columbia River into the interior Great Basin, is creeping into the picture. I wish to present some glimmering evidence of the dramatic changes that Paleoindians had encountered in this complex and dynamic paleoenvironment.

Jessamy, Michael [244] see Hayward, Michele

Jimenez, Elodie-Laure [247] see Barakat, Sarah

Jimenez, Peter (INAH Zacatecas)

[17]

Advances in World-Systems Analysis in Mesoamerica

With the refinement of world-systems analysis into the nested network model (i.e., bulk goods, political/military, prestige goods, and information), Chase-Dunn and Hall (1997) have proposed a research strategy that is applicable to ancient processes of globalization. From the vantage of West Mexico, this presentation will operationalize the model and show material culture patterns that shed light on the nature and impact of cores (Teotihuacan and Tula) on semi-peripheries and peripheries. The period from AD 200 to 1200 will be examined using data from Central Mexico across the expanse of West Mexico and into the NW/SW.

Jiménez Álvarez, Socorro [230] see Shiratori, Yuko

Jiménez Álvarez, Socorro [230] see Woodfill, Brent

Jiménez Cano, Nayeli (Muséum National d'Histoire Naturelle, UMR 7209 AASPE), Séverine Zirah (Muséum Nationale d'Histoire Naturelle, Paris), Kristine Richter (Harvard University), Matthew Collins (Cambridge University) and Elise Philippe Bearez (Muséum Nationale d'Histoire Naturelle, Paris)

[259]

Species Identification of Shark Vertebrae Using Collagen Type I: Toward Ichthyoarchaeological Identification

Sharks are apex predators, and their presence in the world's waters serves as an indicator of the health of marine ecosystems. The species-specific identification of sharks in archaeological materials is essential for reconstructing ancient exploited ecosystems and improving current marine baselines to support conservation efforts as these fish are severely threatened due to overexploitation and habitat destruction. Vertebrae are

one of the most common types of shark remains in ichthyoarchaeological assemblages. Identifying their taxonomy on the basis of morphological characteristics is challenging due to the high species diversity and the wide variety of morphologies within the vertebral column. In this study, we present the initial results of the construction of a collagen reference database for sharks to facilitate paleoproteomic identifications of ichthyoarchaeological remains. Our results consist of collagen type I extracts from vertebrae of five shark species, that were trypsin-digested and analyzed using LC MS/MS and MALDI-TOF to visualize peptide mass fingerprints and amino acid variations in collagen peptides. This presentation showcases the data generated so far and proposes a proteomic approach for taxonomic identifications.

Jiménez Cano, Nayeli [259] see Rubio-Cisneros, Nadia

Jiménez Delgado, Gerardo (Universidad Nacional Autónoma de México) and Javier López Mejía (Universidad Nacional Autónoma de México)
[78]

Employment and Applications of Airborne and Handheld Lidar Scanning at Calakmul

The archaeological site of Calakmul has a long history of archaeological research and documentation, from the initial sketches and hand-drawn plans to those created using precise topographical instruments, to the recording of the different architectural spaces. Nowadays, the use of innovative technologies such as lidar opens new perspectives to appreciate the spatial distribution of architecture in and around the site. It allows us to recognize features on the ground that had not been detected before. During the 2023 field season of the Proyecto Arqueológico Bajo Laberinto, we had the opportunity to carry out a series of lidar surveys using a sensor with SLAM technology in different contexts within the site. This has allowed us to register distinct types of details in the architecture and to evaluate the use of this type of technology for different objectives such as detailed monitoring of the deterioration of the architecture or its use in places with difficult access.

Jiménez González, Berenice (Instituto Nacional de Antropología e Historia) and Guillermo Acosta Ochoa (Instituto de Investigaciones Antropológicas, UNAM)
[214]

Intercambio de materiales pétreos durante el Posclásico Temprano (900-1200 EC) al sur de la cuenca de México: El caso de Acatla-Tulyehualco

Los recursos pétreos son una materia prima imprescindible para la obtención de instrumentos, manufactura de joyería y objetos de consumo ceremonial. En este trabajo se emplean diversas metodologías de estudio que incluyen el análisis tipológico, la caracterización de la materia prima y el estudio de los contextos de procedencia de los recursos pétreos de Acatla, una aldea del Posclásico Temprano. El análisis incluyó lítica tallada y lapidaria empleando pXRF y EDS con el fin de determinar la materia prima y procedencia. Los resultados indican que el yacimiento de Ucareo fue el más importante para la obtención de navajillas prismáticas, mientras que Otumba fue la principal fuente para artefactos manufacturados mediante percusión directa. En las "piedras verdes," se pudo observar que fueron seleccionadas para la manufactura de objetos suntuarios, hachas o cinceles. Para caracterizar esta materia prima y evaluar su procedencia, se realizaron análisis para distinguir las preferencias en el color (colorimetría), el análisis composicional en elementos mayores (SEM-EDS) y elementos traza (XRF). Los resultados indican una preferencia por tonalidades verdes y rocas serpentinitas; también se identificaron materiales en Jadeíta del Motagua, resultados inesperados que sugieren que las aldeas modestas de este periodo estuvieron involucradas en las redes de intercambio.

Jiménez Osorio, Liana (Investigador Independiente)
[210]

Los vehe ñuhu o santuarios en los códices mixtecos

Una manera de conocer los santuarios de la época precolonial es a partir de la evidencia arqueológica, sin embargo, debido al tiempo que ha transcurrido y, principalmente, a su destrucción durante la colonización en

1521, la evidencia material con que se cuenta es escasa y fragmentaria, siendo necesario recurrir a otras fuentes. En este caso, los códices mixtecos son una excelente fuente de información de primera mano para estudiar los *vehe ñuhu* (santuarios), especialmente los que estuvieron en uso durante el Posclásico (900-1521 dC). Estos lugares sagrados se muestran en los códices principalmente como parte de topónimos y en relación con rituales y/o narrativas sagradas. En un estudio reciente que realicé me enfoqué únicamente en los lugares en donde se llevaron a cabo los diferentes actos rituales. En este sentido, mi principal indicador de la presencia de un santuario en los códices fue la realización de algún ritual. Con base en los análisis propongo una clasificación en cuatro grandes grupos: Santuarios Construidos, Santuarios Naturales, Paisajes Sagrados y Santuarios Temporales. De tal forma, en esta ponencia hablaré de los santuarios que fueron representados en los cinco códices mixtecos precoloniales y presentaré, con algunos ejemplos, la clasificación que propongo.

Jinnah, Zubair [162] see De La Peña, Paloma

Johansen, Leslie

[195]

Discussant

Johns, Sherman (University of Missouri, Columbia), Jay Stephens (University of Missouri Research Reactor [MURR]), Virginie Renson (University of Missouri Research Reactor [MURR]) and Keith Ashley (University of North Florida)

[121]

Mill Cove Complex Native Copper: A Lead Isotopic Study

Long-distance movement of copper across North America is often noted by archaeologists but little studied, with its provenance typically assumed to be the Great Lakes region. Such claims need to be tested, and recent studies have approached this problem using laser-ablation instrumentation to assess chemical and lead isotopic variability. Despite the renewed focus on this topic, minimal comparative data still exist, and solution-mode approaches yielding better precision and accuracy have not been explored. This study, therefore, breaks new ground and provides preliminary findings of a solution-mode lead isotopic study of native copper artifacts from the Mill Cove Complex, a St. Johns II (AD 940–1300) civic-ceremonial center in northeastern Florida. These results provide foundational data for future copper provenance research in North America.

Johnson, Abigail

[325]

“Picking at the Scabs of Ancient Wounds”: The Derry Excavations Collection

The “Derry Excavations Collection” (DEC) is a legacy collection recovered during a series of late 1970s salvage excavations conducted by archaeologist Brian Lacey in the city of Derry, Northern Ireland. This project focuses on a subset of artifacts associated with a seventeenth-century “town ditch” defensive feature used during the “Great Siege,” a pivotal episode in Derry’s history that has remained a social and historical lightning rod amid Protestant/Catholic and Unionist/Loyalist sectarian conflicts. Contemporary manifestations of these conflicts have also had a formative impact on the DEC itself, both in the circumstances surrounding its excavation as well as its subsequent management and storage. This project examines the layers of human activity and conflict in both the history reflected in the artifacts as well as the DEC’s tumultuous post-excavation “taphonomy.” Guided by the contents of the collection and a thorough documentary “excavation,” I interrogate how the improvisations demanded during emergency and conflict situations may produce atypical or “difficult” archaeological results that nonetheless reflect the complex web of social negotiations that guided their path from deposition to curation and may reveal a collection to be more than the sum of its material parts.

Johnson, Amber (Truman State University) and Jessica Totsch (University of Missouri)
[107]

Refining Ecological Contexts of Animal Herding: Implications for Culture Process

Previous research that derived expectations from hunter-gatherer macroecology demonstrates that the combination of effective temperature zones and setting near coastlines or very large interior lakes display distinct patterns of resource intensification. These patterns allow researchers to predict the environmental zones of early plant and animal domestication and compare these expectations with archaeological site distributions. For plant domestication, the archaeological pattern is largely as expected, but it is clear that these variables alone are not sufficient to anticipate the timing/location of animal domestication. This comparative study seeks to refine our understanding of the environmental factors contributing to early animal domestication using geographic information systems (GIS) and spatial statistics to analyze measures of seasonality of plant growth, and other important variables while identifying regional and temporal patterns that may signal a shift in subsistence strategy to animal domestication. Clarifying which seasonality measures are most associated with the locales of early animal domestication will provide additional valuable insights for the development of formal models of relationships between innovation and population dynamics across multiple types of ecosystems.

Johnson, Bart [133] see Coughlan, Michael

Johnson, Claudia [92] see Hawley, Kirsten

Johnson, Erlend (Tulane)
[165]

Chair

Johnson, Erlend (Tulane), Mark Rees (University of Louisiana, Lafayette) and Matthew Helmer (US Forest Service)
[165]

Hurricane Salvage and Public Archaeology: Preliminary Results from Data Recovery Excavations in Kisatchie National Forest of Western Louisiana

Hurricanes Laura and Delta in 2020 caused extensive tree-fall damage to more than 100 sites throughout Kisatchie National Forest, including two large precontact sites (16VN3504 and 16VN3508). 16VN3504 and 16VN3508 are multicomponent sites measuring more than 100 acres and are eligible for listing on the National Register of Historic Places. In addition to storm damage, they have been heavily impacted by looting. Excavations were conducted at these sites last spring through an agreement between the US Forest Service and the University of Louisiana at Lafayette, Louisiana Public Archaeology Lab. The excavation of 55 m³ documented high densities of artifacts and cultural features, including a large number of projectile points, at least three post molds, and activity surfaces, with cultural material extending down more than 2 m in depth. Diagnostic artifacts indicate intermittent occupation of the Pleistocene terrace overlooking Drakes Creek from the Paleoindian period (ca. 13,500–10,000 years before present) through the early twentieth century. This presentation shares the preliminary results, including an analysis of more than 30,000 artifacts representing 13 millennia of Louisiana's deep history. Mitigating historic properties damaged by hurricanes and looting also presents an opportunity for advancing public archaeology and education.

Johnson, Erlend [104] see Church, Gloria

Johnson, Erlend [104] see Tarry, Sarah

Johnson, Jeremy [262] see Lewis, Michael

Johnson, John (Santa Barbara Museum of Natural History)**[304]***Chumash Watercraft, Maritime Exchange, and Sociopolitical Complexity*

Jeanne Arnold explored the relationship between advanced boat technology and sociopolitical complexity in her research and in many publications. She investigated the origins of the Chumash *tomol* (plank canoe) and emphasized its key role in facilitating cross-channel trade between island and mainland coastal towns. She linked the importance of maritime exchange to the Chumash islanders coming to specialize in the manufacture of shell bead currency. Arnold advanced the study of these developments both theoretically and empirically through archaeological research. She engaged in vigorous, yet informative debates with others over theoretical issues and varying interpretations of evidence. The current study builds on Arnold's and others' contributions, calling attention to ethnographic and ethnohistoric observations that shed further light on the relationships between Chumash watercraft, exchange, and sociopolitical complexity.

Johnson, Justin [47] see Wesp, Julie

Johnson, Kimberly (Hamilton College), Hannah Lau (Hamilton College), Lara Fabian (University of California Los Angeles) and Jeyhun Eminli (Azerbaijan National Academy of Science [AMEA])**[284]***Dating Islamic Ceramics from Näsiri Kolat and Şəğolhoni*

The mortuary site Näsiri Kolat in the Lerik region of Azerbaijan was occupied from the Antik through the Middle Islamic periods (eleventh–sixteenth centuries), a fact further supported when the site is considered with the midden site Şəğolhoni. Ceramic analysis from these sites permit us to better understand how people in the Lerik region interacted with more distant communities. This project dates each site's occupation based on the style of Islamic ceramics found at Näsiri Kolat and Şəğolhoni and creates a stylistic database relevant to ceramics excavated in the region, with specific attention to decorative methods and designs. With images of Lerik ceramics, gray literature, and comparanda drawn from publications, we have built a database of the ceramics, analyzed the stylistic features in each sherd, researched the glazes present, and isolated a chronology of Islamic occupation in Näsiri Kolat and Şəğolhoni. Though these ceramics are often excavated from disturbed and comingled contexts, these analyses will better researchers' understanding of the chronology and the kinetic social movement of communities in Central Asia. This work contributes to the rich history of Islamic art in Azerbaijan and provides further context and texture regarding analysis of Islamic ceramics.

Johnson, Lisa [164] see Johnson, Lucas

Johnson, Lisa [69] see Lopez, Dayanira

Johnson, Lucas (Far Western Anthropological Research Group Inc.) and Lisa Johnson (University of Nevada, Las Vegas)**[164]***Household Crafting in the Maya City of Palenque, Chiapas, Mexico*

Classic period (250–900 CE) Maya economic systems were diverse with most lowland cities revealing a combination of intensive surplus crafting workshops and more domestic household crafting. Some craft production may have been centralized and occurring under the supervision of the state and others appear to be operating independently at the household level yet still within city settlement. At Palenque, this appears to be the case with some crafting occurring in the central palace district and other crafting occurring in private homes within a neighborhood context. We are still learning the extent of diversity in the types of activities that occurred in Palenque's residential groups, however as compared to other residential groups that have

been excavated in the same neighborhood, one group stands apart as a multi-crafting household. The data includes many obsidian drills and nearly 100 chert drills recovered from discrete locations. This presentation will discuss recent excavations in a Palenque neighborhood and the broader implications following a preliminary analysis of chert and obsidian flaked stone.

Johnson, Lucas [41] see Freund, Kyle

Johnson, Norma [7] see Schenkenberger, Kaelyn

Johnson, Phyllis [265] see Williams, Makayla

Johnson, Rachel (Tulane University), MinJoo Choi (Tulane University), Julia Sjödhahl (Tulane University), Ryan Clasby (University of Illinois, Urbana-Champaign) and Jason Nesbitt (Tulane University)

[287]

Return to Yarinacocha: A pXRF and Petrographic Study of Ceramics Artifacts from the Tutishcainyo Site Series (1400 BCE–900 CE), Ucayali, Peru

When Donald Lathrap excavated a series of related archaeological sites on the shores of Yarinacocha, an oxbow lake of the Central Ucayali River in the Peruvian Amazon, the elaborately decorated pottery and long-occupied sites he uncovered contradicted the prevailing narrative of the Amazon as a “counterfeit paradise” impeding the development of cultural complexity. Instead, Yarinacocha’s six ceramic phases materialize a complex culture history. Prior stylistic analysis indicates the first three ceramic phases present a roughly continuous cultural sequence (1400–200 BCE), while the later three each embody significant stylistic departures, possibly related to regional Barrancoid (ca. 200 BCE) and Arawakan (ca. 100 CE) migrations. This study assesses diachronic ceramic craft production from a technological perspective and tests the hypothesis of local clay exploitation by combining portable X-ray fluorescence (pXRF) and thin-section petrography on a representative sample ($n = 37$) from the American Museum of Natural History’s Yarinacocha collection. These combined archaeometric techniques point to the continuous exploitation of multiple clay sources, as well as significant diachronic changes in Yarinacocha’s ceramic production related to the shifting social landscape.

Johnson, Suzanne [293] see Tetrault, Tara

Johnson, Taryn [99] see Galloso, Robin

Johnston, Christine [173] see Gardner, Chelsea

Johnston, James [133] see Coughlan, Michael

Johnston, Julia (Louisiana State University), Keri Porter (University of Notre Dame) and Susan Sheridan (University of Notre Dame)

[324]

Applying the Index of Care to Antemortem Cranial Trauma at Bab adh-Dhra’

The Early Bronze Age II-III (EBA) at Bab adh-Dhra’ represents a period of significant social change partially marked by the establishment of a fortified town at the site. This research examines the individual and

community-wide implications of antemortem cranial depression fractures (CDFs) during this shift in socioeconomic lifestyles and population density. The Index of Care, a progression of four analytical steps utilized in bioarchaeology of care studies, was applied in the case of two individuals to determine possible brain damage and assistance required from the community after their initial cranial trauma based on the location of the CDFs and the use of Brodmann areas, a regional/functional map of the brain. Possible biological and social consequences of the injuries were determined using a combination of clinical, neurological, and archaeological data. Results determined that both individuals would have required short-term care following the initial injury. Possible long-term care would have been necessary if neurological or motor function was affected. Despite these possible impairments, both survived their initial injuries and were eventually included in the A22 charnel house at the site. This suggests that cranial trauma was an understood and accepted experience within the community of Bab adh-Dhra' during the EBA II-III.

Johnston, Susan (George Washington University)

[91]

Continuity and Discontinuity: Ritual from the Iron Age to the Early Medieval Period in Ireland

While religion in Ireland is conventionally divided into the pre-Christian Iron Age and the Christian Early Medieval period, it seems obvious that the actual transition was far more complex. The details and focus of ritual shifted in certain ways to incorporate the new beliefs, and these can be seen in the archaeology of both periods. And yet, the break was not always as clear as it might seem. While ritual practice and its underlying context of meaning may have changed, the same landscapes continued to be used and sites which were important in the Iron Age continued to have a meaning in the Early Medieval period. These issues are explored in the context of Iron Age ritual, particularly focused on the ceremonial centers sometimes known as “royal sites”—Tara, Dún Ailinne, Cruachain, and Emain Macha. While these sites ceased being centers of ritual life, they continued to have significance in the context of an otherwise increasingly Christian culture, providing insight into the ways in which changes in belief and practice were experienced and expressed in Early Medieval Ireland.

Jolie, Edward (University of Arizona) and W. Rex Weeks (Chattanooga State)

[29]

A New Twist for Ancient Maya Yarns

Ethnographic, iconographic, and archaeological records attest to the sophisticated and sumptuous textiles produced by Maya peoples in ancient and contemporary times. However, historical neglect of cordage industries in archaeology, combined with poor organic preservation and gaps in the ethnographic record, complicate attempts at a fuller reconstruction of the significance of spun and twisted yarns in ancient Maya society beyond their recognized role in cloth production. In this paper, we offer a new perspective on the cultural significance of Maya yarn production informed by iconographic analysis and a broader cross-cultural anthropological context. Our observations contribute to a heretofore unacknowledged cultural understanding of the significance of yarn production among Maya peoples with pronounced ritual, cosmological, and elite symbolic implications.

Jonassen, Alexandra (CSU Fullerton)

[237]

Geochemical Analysis of Felsite Quarries at Pluvial Lake Mojave

This study geochemically documents the conveyance of felsite from quarries in the Soda Mountains adjacent to pluvial Lake Mojave, California to the archaeological sites along its terminal Pleistocene-Early Holocene (TP/EH) shorelines. Prior research suggests Paleoindians conveyed toolstone to Lake Mojave from the Coso Volcanic Field and Goldstone dacite outcrops to the northwest and Shoshone Mountain obsidian to the north, but little is known of the geochemical signatures or conveyance of the good quality, locally occurring felsite. I propose that a geochemically derived sourcing model using felsite artifacts from Lake Mojave's TP/EH shoreline sites will improve my understanding of procurement strategies around Lake Mojave and across the

region. To address this, I collected geologic samples from eight distinct felsite quarries and analyzed them with a pXRF instrument. Six quarries are in the Soda Mountains on the western edge of Lake Mojave (Soda Mountains West), another in the Soda Mountains to the north (Soda Mountains North), and one on the eastern shoreline of Lake Mojave. These three collection areas have geochemically distinct signatures, including some ability to identify artifacts to specific sources in Soda Mountains West, and together can be used to geochemically distinguish locally procured felsite artifacts around Lake Mojave.

Jones, Catherine (SNA International supporting the DPAA)

[330]

Chair

Jones, Catherine (SNA International supporting the DPAA), Shannon Freire (University of Wisconsin, Milwaukee), Jessica Skinner (Mayo Clinic Arizona) and B Charles (University of Wisconsin, Milwaukee)

[330]

There Is Much Else that May Be Told: Lessons in Navigating Nontraditional Career Paths in Anthropology, Archaeology, and Beyond

Throughout her career, Patricia B. Richards has held many prominent positions within and adjacent to conventional academic anthropology, among them senior scientist, adjunct curator, principal investigator, and associate director of an archaeological research laboratory. While these positions have traditionally been held in different regard from the professoriate, they allowed her to forge a successful nontraditional career path well before it was widely considered a viable option. Her experiences navigating this path and the work ethic she models have influenced the teaching, advice, and mentorship she provides to her many students, preparing them for equally successful careers in a variety of anthropological professions. By framing this mentorship and support as guiding principles, this paper defines in small part the positive and wide-ranging impact Dr. Richards has made on the discipline through the paths taken by her mentees. We share these dynamic principles (and their associated anecdotes) to demonstrate their continuing influence and inspire similarly impactful mentorship.

Jones, Christine (Texas A&M University Central Texas)

[2]

Unearthing Potential: Using Earth Rock Ovens as a High-Impact Practice in the Undergraduate Archaeology Course

High-impact practices (HIPs) using hands-on activities, experiential learning, and collaborative learning employ methods that educators in archaeology have already been using for decades. The pedagogical push to use HIPs recently involves widespread recognition that not only do these methods work to engage students, they rock! This paper explores the use of hot rock cookery as a high-impact practice and evidence-based example of experimental archaeology for undergraduate courses. The method involves heating rocks in a small pit to generate slow heat for cooking. A simple version of the oven and the materials needed for a smaller classroom project is described, as well as a longer module with a complementary lecture and readings. Students construct the oven and cook food using local materials, while learning about its significance and archaeological evidence of hot rock cookery in prehistory. Discussion includes (1) how students gain an understanding of archaeological concepts and ancient foodways through this method; and (2) how instructors can add this activity to their archaeology courses to increase student engagement beyond traditional assignments.

Jones, Emily [92] see Garrison, Ervan

Jones, Emily Lena (University of New Mexico)**[260]***Across a Threshold: The Columbian Exchange in the Land of Tiguex*

In August 1540 Hernando de Alvarado, a member of the Coronado expedition, entered what he termed “the province of Tiguex” (today known as the Middle Rio Grande Valley of Central New Mexico), kicking off several centuries of socioeconomic transformation. As a case study in the impacts of the Columbian Exchange, this region is instructive. Today, it is home to Albuquerque, New Mexico’s largest city, and the associated urban sprawl of a twenty-first-century Western city. In contrast to the broad, braided river Alvarado observed, the Rio Grande is confined to a relatively narrow channel; many of the grasslands that were so tempting to Coronado’s army have been overgrazed. Native grasses have been joined (and often out-competed) by Eurasian plants, and introduced animals dominate both environments and the diets of the people who live here. Was this a gradual process, with each step having a cumulative impact? Or was the transition more of a threshold change—an abrupt change in environmental processes and/or species composition in a formerly resilient landscape? In this paper, I use the zooarchaeological record of central New Mexico to understand how this transformation occurred and the legacies with which it has left us.

Jones, Emily Lena [200] see Nagaoka, Lisa

Jones, Eric (University of Colorado, Boulder), Sharon DeWitte (University of Colorado, Boulder) and Catherine Livingston (University of South Carolina)**[44]***Health and Mortality during the Transition to Commercial Dairy Farming in Nineteenth-Century Upstate New York*

We examine the relationship between farm production and strategy and the health and mortality patterns of farm families during the late nineteenth century in upstate New York. This was a time when farmers were transitioning from subsistence to commercial farming and when dairy farming was becoming the preferred strategy to increase profits. Here, we focus specifically on the Town of Fenner in Madison County. The first part of this relationship is examined through an analysis of agricultural schedules in federal and state census records from 1850 to 1880. From these data, we apply an equation to calculate surplus and perform k-means cluster analysis to determine strategies based on livestock and crop production levels. We establish health and mortality using census mortality records and obituaries and death certificates when available. We conducted a multiscalar analysis by both cross-referencing individuals in the mortality schedule with their associated farm to examine specific households and analyzing general townwide health trends in comparison to farm production and strategy trends. The results suggest that there is a complex relationship between farm production level and strategy and mortality patterns that are not as simple as more household expendable income results in better health outcomes.

Jones, Eric [171] see Hansen, David

Jones, Gwendolyn (University of Texas, Austin)**[311]***Chair***Jones, Gwendolyn (University of Texas, Austin)****[311]***“Children Cry For It!” An Artifact-Centered Study of Children’s Health*

Children’s impact on material culture is often ignored in archaeology, and outside of mortuary analysis, archaeological studies of children almost exclusively focus on their toys. In this paper, I consider the procurement, use, and discard of medicines from a child-centered framework. Using archaeological context, archival documents, and oral histories to establish a life cycle for items such as an intact bottle of “Bumstead’s Worm Syrup,” I explore children’s health at the turn of the twentieth century. These artifacts from Eckley Miners’ Village, a coal company town in northeastern Pennsylvania, were unearthed during CRM

surveys and excavations in 1989 and the 1990s, and I have identified several using local drugstore catalogues from the 1880s. Contemporaneous diary entries from Eckley's company store clerk and oral histories collected there in the 1970s illuminate the community's perception of children's health. This research provides insight into the daily lives of working-class children, and how their health and wellnesses impacted their families and the community as a whole.

Jones, Ian (New York University)

[22]

The Afterlife of a Desert Estate: The Qasr Complex at al-Ḥumayma, Southern Jordan at the Turn of the Second Millennium AD

From 1992 to 2002, the Humayma Excavation Project investigated a fairly modest palatial structure dubbed Field F103 at the site of al-Ḥumayma in southern Jordan. Early on, the excavators recognized that this structure should be identified as the qasr and mosque complex described in Arabic historical sources as having been built at the site by the 'Abbasid family. Since then, most discussion of F103 has focused, understandably, on its status as the location where the 'Abbasids planned the revolution that led to their mid-eighth-century AD ascent to the Caliphate. Occupation continued after the 'Abbasid family's departure, however, and recent analysis of the unpublished material from these excavations has revealed that the complex was remodeled in the tenth to eleventh century AD, generally seen as a period of collapse in the region. This paper will focus on this phase of occupation at the site to piece together the processes of political and economic fragmentation that took place in the southern Levant during this transitional period and the ways local minor elites, like those occupying al-Ḥumayma, adapted to this changing political-economic landscape.

Jones, Jennifer (University of Minnesota Duluth)

[45]

Applied Projects for Teaching Archaeology: Creating an Identification Guide for Trade Axes (1600–1900) in the Western Great Lakes Region

The University of Minnesota Duluth returned to in-person teaching as the pandemic emergency waned. Modifications to an upper division Archaeological Method and Theory course were made to accommodate students with serious demands on their time from outside employment as well as potential disruptions to instruction from COVID infections. The University of Minnesota Duluth partnered with a local avocational expert to design an applied project that would incorporate a variety of quantitative and qualitative skills and appeal to both anthropology and non-anthropology majors. Over the semester, the students created and tested a chronological identification guide for iron trade axes dating to 1600–1900 from the western Great Lakes Region. The Guide is based on 200 axes held in public institutions and is intended for use by museum curators and the general public. The students presented their work at a campus research fair and wrote a 94-page report which are available publicly on the University of Minnesota Digital Conservancy. Planning for COVID interruptions, accommodating disruptive student work schedules, while simultaneously doing an applied project, required adjustments to the course schedule and assignments.

Jones, John [31] see Lentz, David

Jones, John [157] see Neff, Hector

Jones, Joseph [16] see Bender, Katharine

Jones, Joseph [16] see Sevestre, David

Jones, K. C. [82] see Cochran, Lindsey

Jones, Kara (UNLV)**[237]***Geospatial Analyses of Site Distributions at Ivanpah Dry Lake*

Ivanpah Dry Lake is an overlooked Holocene and paleolake located in the eastern Mojave Desert. Much of the archaeological work done in the area has centered around industry and development with data available in gray literature site reports and records. This research is a component of the author's Master's project relating to the geospatial distribution of sites and resources at Ivanpah Dry Lake. A 2018 geological study conducted by Spaulding and Sims revealed that Ivanpah is not a Holocene Lake as previously thought, but rather a paleolake. Geospatial analyses run on 59 sites within the paleolake Ivanpah boundary revealed land use trends related to resource targeting and adaptations over time in a changing environment. These tests show that Ivanpah was used persistently over time and had evidence of use by multiple cultural groups. These results have meaningful implications considering the overlap of the study area with the intersection of two important indigenous trails, the Salt Song Trail and Southern Fox Song trail. The conclusions drawn from this research creates an argument for increased protection and preservation of the entire Ivanpah Lake region and the value of nondestructive research methods by drawing on existing data.

Jones, Lauren**[272]***Should I Measure It or Should I BLAST It? A Case for the Regular Integration of Osteoarchaeology and Ancient DNA*

Osteoarchaeology, including bioarchaeology and zooarchaeology, has been a staple in our field for decades. Now, archaeogenetics (or aDNA) has also become a staple. But how do we decide when to use one approach or the other? What provides the best data for one's research questions? Here, I present data from a study of archaeological gophers from the Hall's Cave site in central Texas. Morphological and genetic results agree on the taxonomic identification for ~90% of the study sample, but ~10% of the individuals showed disagreement at the genus level between the two methods. Modern comparative ecological data suggests that this disagreement is a result of DNA inserts that can obscure accurate taxonomic identification from short genetic fragments. Thus, caution is warranted when using single-fragment aDNA to determine the taxonomy of archaeological faunal material. The use of both morphological and genetic identification methodologies can help to resolve this type of issue and is therefore an advantageous approach to questions of taxonomic identity in the archaeological record.

Jones, Mica (School of Archaeology, University of Oxford)**[190]***Reconsidering Cattle and Power at Great Zimbabwe*

Great Zimbabwe (GZ) is key for understanding precolonial African urban systems. Cattle bones are some of the most common materials recovered from GZ and have played a central role in interpreting the ways power was enacted at the site over time. Scholars use dental wear and eruption data from cattle molars and long bone epiphyseal fusion patterns to argue that elites on the site's hilltop regularly ate prime cuts from pre-breeding age cattle, while commoners away from the hill ate less beef and of lower quality. Although these foundational studies raise interesting social questions about animals and people at GZ, most rely on data from one poorly described context excavated in the 1970s. To build a more coherent picture of meat-eating and its relationship to inequality at the site, I apply updated age-at-death and body part representation methods to cattle remains from recently excavated midden contexts across the site. Analyses are ongoing but suggest that the slaughter and consumption of entire young cows was common throughout the site's use in both "elite" and "commoner" areas. This implies that links between food and power were more complex than originally thought and possibly involved feasting activities, perhaps on a seasonal basis.

Jones, Olivia and Megan Leight (West Virginia University)**[147]***Raising Appalachia: Promoting and Fostering Academic Spaces for Undergraduate Students to Engage with Archaeology at West Virginia University*

Students studying anthropology and art history at West Virginia University (WVU) have not always had access to experiential learning and laboratory training experiences. However, recent initiatives by early career faculty have boosted student engagement and prompted career success. In this presentation, we show that forming partnerships between university academic departments and state archaeology facilities provide crucial hands-on training and opportunities for students. The WVU Archaeology Lab was founded during the height of the pandemic in 2020 with one freshman student and a box of unwashed artifacts from the West Virginia Archaeological Research and Collections Management Facility. Since then, students working in the lab have processed thousands of artifacts, presented at conferences, completed field schools, and are publishing faculty-assisted research. These accomplishments have primarily been by Appalachian natives, and we have consciously prioritized first-generation, low-income students by hiring through the federal work-study program. The pedagogical changes were done with little funding but have had substantial effects on our undergraduates. These experiences increased students being awarded prestigious funding, such as the Gilman Scholarship, gaining admittance to graduate programs, graduate funding, or securing positions after graduation. This paper demonstrates how partnerships between academic institutions and collections facilities foster student engagement in Appalachia.

Jones, Thomas [88] see Burger, Rachel

Jones, Warren [150] see Church, Lynn

Jonsson, Emily (University of Arizona)**[167]***At the Intersection: Jicarilla Apache Values and Heritage Management*

Since the 1970s, tribal archaeology programs and Tribal Historic Preservation Offices (THPOs) have served a significant and positive role in supporting tribal sovereignty in heritage management. The increasing application of Indigenous and collaborative archaeologies has contributed toward both this goal and deepening our knowledge of past and present cultural traditions. This paper examines the application of tribal values in heritage management through the La Jara archaeological site, a Gallina phase (1100–1300 CE) cultural site on the Jicarilla Apache Reservation in northern New Mexico. The history of the management of La Jara, from its initial 1970s excavations by tribal and nontribal archaeologists up to more recent organization of its records and collections, offers insight into tensions around tribal sovereignty, cultural affiliation, NAGPRA, and the preservation of cultural heritage on Jicarilla Apache Nation.

Jorgeson, Ian (Southern Methodist University [SMU]) and Matthew Boulanger (SMU)**[84]***Obsidian Procurement in the Northern Tiwa Homeland*

We present results of a large-scale geochemical sourcing study of obsidian artifacts from Picuris Pueblo. We compare those results to obsidian-sourcing data from other sites on the Taos Plateau and in the Rio Chama basin. At Picuris Pueblo, almost all obsidian artifacts were produced on Valles Rhyolite or Cerro Toledo obsidian. Surprisingly, El Rechuelos obsidian is exceedingly rare. In contrast, assemblages from earlier sites on the Taos Plateau are predominantly El Rechuelos obsidian. We discuss the possibility that the arrival of Tewa-speaking migrants in the Rio Chama between the late thirteenth century and early fourteenth century effectively blocked access to El Rechuelos obsidian sources. This influx of immigrants into the Northern Rio Grande disrupted long-standing resource-procurement patterns and use of traditional landscapes for the people of Picuris Pueblo.

Jöris, Olaf [93] see Robitaille, Jerome

Jorissen, Philippa (University of Oregon), Michelle LeFebvre (Florida Museum of Natural History) and Scott Fitzpatrick (University of Oregon)
[263]

Unearthing the History of Mokil Atoll: A Fresh Perspective through Zooarchaeological Exploration

There has been a dearth of research on atolls in the central-eastern part of the Caroline Islands, especially from a zooarchaeological perspective. We present the first zooarchaeological analysis for Mokil atoll, which has been continuously inhabited since 1700–1500 cal BP. The material was excavated in 2013 on the islet of Kahlap. The majority of the zooarchaeological remains, over 67%, were mollusks, followed by fish, and a marginal quantity of birds and mammals. Use of bivalves largely decreases over time, while a slight increase in gastropods can be distinguished. The most prominent families represented are mesodesmatids, cone snails/true conch, and ceriths. Fish, especially parrotfish, wrasses, and groupers, were most intensively utilized between 910–1550 BP. Rats first appear in the archaeological record around 910–1550 BP, while evidence for chickens and dogs dates back as early as 1400–1700 BP. None of these appear in the oldest layers, suggesting that these species, often considered to be part of the “transported landscape,” were not introduced during the initial migrations to Mokil. This study sheds light on early migration strategies to atoll environments, as well as contributes to understanding human-environmental interactions through time, in one of the most remote areas of the world.

Joseph, J. (New South Associates)
[253]

Reflections on DGR and RBR: David G. Anderson and the Richard B. Russell Reservoir Project

David Anderson’s archaeological career took root in the fields of cultural resource management and his research on the Richard B. Russell (RBR) Reservoir was integral to his intellectual development. Through three seasons of fieldwork and subsequent analysis and reporting, he directed archaeological excavations at seven sites for the RBR project including Rucker’s Bottom and the Abbeville and Bullard Site Groups. This work witnessed elements of his approach to archaeology, drawing from an ecological perspective and involving an extensive team of specialists. The RBR project itself is historically notable for the CRM collaboration between the National Park Service’s Interagency Archaeological Services Division and the US Army Corps of Engineers, Savannah District, and for the production and distribution of the Russell Papers as the final products of each investigation. Fittingly, David would serve as the lead and coauthor of the Russell Paper technical synthesis produced as the final technical Russell Paper. This presentation reflects on David’s work at RBR and the place of the project in the history of CRM.

Joyce, Arthur [160] see Barber, Sarah
Joyce, Arthur [314] see Perry, Gabrielle

Joyce, Rosemary (University California Berkeley)
[296]

Fluid Stone: Geological Materials in Process

Geological materials that constitute features in archaeological sites in Central America range from unfired clay and unmodified cobbles, to cut stone, and plasters produced by heating limestone. What these materials have in common is that from an archaeological perspective, they are often treated as inert, more stable than organic materials, less active, not agential. In this paper, drawing on theoretical frameworks from geoarchaeology, feminist new materialism, and the varieties of practice theory that have recently been advanced as “process archaeology,” I seek to rethink mineral matter as active, agential, dynamic, and in process. This involves considering how people in the Central American past engaged with clay and stone, under conditions that exposed the energy inherent in these materials, including flooding, volcanic eruptions,

and the emergence of stone from hot springs and cave formations. It also involves considering indigenous ontologies, for which I draw on ethnographic and historical documents from Lenca communities in Honduras. Building on observations by indigenous people who recognize sources of mineral matter such as mountains and volcanos as animate, and recognizing the ways people in the past intra-acted with durable formations of rock and clay allows us to define a new materialist geoarchaeology for this region.

Joyce, Rosemary (University California Berkeley)

[327]

Discussant

Joyce, Rosemary [132] see Sheptak, Rus

Joyce Seals, Leila (Pennsylvania State University) and Rolfe Mandel (Kansas Geological Survey)

[316]

Geoarchaeology of the Big Blue River Valley, NE Kansas: Implications for Paleoindian and Earlier Archaeology

The Central Plains of North America have yielded fewer stratified Paleoindian archaeological sites than other regions of the Great Plains. The dearth of recorded early sites is due to geologic filtering of the archaeological record; processes of erosion and deposition have removed or deeply buried early sites, respectively. At the Coffey site in the Big Blue River valley (BBRv) in NE Kansas, however, late Wisconsinan alluvium (Late Member of the Severance Formation; LMSF) containing a stratified Folsom component was documented 50 cm below surface. Given the presence of the LMSF at the Coffey site, alluvium of similar terminal Pleistocene to early Holocene age may occur elsewhere in the valley. We used soil stratigraphic data from seven localities and 38 radiocarbon dates spanning the last ~25,000 years to assess the temporal and spatial pattern of late-Quaternary landscape evolution in the lower BBRv, and to determine the potential for stratified Paleoindian and earlier cultural deposits. We conclude that terrace fills dating to or before ~10,000 cal BP are rare in the BBRv, but that alluvial fans along the valley margins consist of LMSF (ca. 12,000–25,000 cal BP) and are therefore targets for archaeological survey seeking stratified Paleoindian and older cultural deposits.

Joyce Seals, Leila (Pennsylvania State University)

[336]

Discussant

Juarez, Santiago (Colgate University)

[230]

Perplexing Landscapes: The Role of Natural Landscape Features in Late Preclassic Site-Design of Noh K'uh in Chiapas, Mexico

The Late Preclassic (400 BC–AD 250) ceremonial center of Noh K'uh was designed in a quincunx pattern to commemorate the importance of cardinality and cosmological symbols. This kind of architectural design was commonplace in Preclassic Mesoamerica, as the earliest populations shaped their ceremonial spaces in reverence to natural phenomena, both terrestrial and celestial. Previous investigations at Noh K'uh have indicated that the quincunx pattern aligned to distant landmarks that surrounded the basin formation. A recent survey (2022) of these landmarks revealed a complex set of settlement patterns that blurred the line between the altered and unaltered environment. Ultimately, findings from the basin of Mensäbäk help redefine understandings of site boundaries, and ongoing survey work continues to reveal a site design that integrated massive construction projects together with natural landforms.

Judkins, Abigail (University of New Mexico), Katherine Peck (University of New Mexico) and Martin Welker (University of Arizona)

[260]

Navigating the Frontier of Colonial Diets: Domesticates and Wild Resource Use in the North America Fur Trade
European settlers in the Americas brought with them a familiar suite of domesticated plants and animals and frequently relied on them for subsistence. Between the seventeenth and nineteenth centuries, European colonial powers became involved in the fur trade, resulting in the development of numerous posts placed at varying distances from developed agricultural centers. Euro-American colonists had access to traditional Eurasian agricultural products; however, fort and trade post residents also incorporated local and wild resources into their diets. In this paper, we examine the role of Eurasian domesticates (e.g., pigs, cattle) in fur trade community subsistence. Specifically, what effect do regionality and geographic location have on the presence of domesticates at fort locations? Additionally, does the nationality of fort occupants affect dietary patterning? We assess zooarchaeological assemblages from 25 fur trade-era forts across four physiographic regions: Coastal Pacific, Great Lakes and East, Hudson Plain, and Inland North America. We use statistical analyses, including indexes, ANOVA, and clustering to assess the extent to which geography and nationality impact the assemblage. These data help shed light on how colonial interactions were shaped by the reliance on domesticate and wild resources during the fur trade in North America.

Juengst, Sara (UNC Charlotte)

[238]

Discussant

Juengst, Sara (UNC Charlotte), Sergio Chavez (Central Michigan University) and Stanislava Chavez (Wayne State University)

[299]

Home Is Where Your Boat Is: Movements within and around the Titicaca Basin (800 BC–AD 200)

The Titicaca Basin has long been home to communities of people who navigated their highland landscape effectively. Much research has been devoted to early developments in the southern lake basin (in modern-day Bolivia) as well as later communities on the northwestern side of the lake (in modern-day Peru). However, few studies have focused on movement throughout the region, which inevitably occurred given evidence for watercraft and reliance on lacustrine resources. This paper presents new strontium isotope evidence for both long-distance and circum-lacustrine movement of peoples between 800 BC and AD 200. We emphasize how these regular movements were likely tied to familial and ritual networks that facilitated trade throughout the region. We build on previous studies of archaeological and bioarchaeological remains to argue that these networks allowed communities to navigate environmental and social changes (such as a long-term drought and establishment of new territories and settlements) without the creation of social hierarchy or increased interpersonal violence. Additionally, this case study makes it clear that people were crossing modern boundaries with regularity in the past, emphasizing the need for transnational perspectives when interpreting the Andean past.

Juengst, Sara [70] see Cabanzo, Almi

Juengst, Sara [70] see Recuero, Taylor

Juengst, Sara [70] see Stumpf, Mara

Juengst, Sara [70] see Ward, Emily

Julison, Julie (Wayne State University) and Randy Haas

[145]

The Prevalence of Entomophagy in the Americas: A Meta-analysis of Human Coprolites

Ethnography demonstrates entomophagy, or consumption of insects, to be a relatively common practice around the world. Despite such prevalence, insect foods are discussed rarely in the archaeological literature, presumably due to Western biases, which may acknowledge the presence of edible insects but refrains from

considering them a viable food resource. To evaluate the extent to which past Indigenous communities of the Americas consumed insects, we conduct a literature-based meta-analysis of human coprolites. The analysis identifies over 9,150 specimens from 52 archaeological sites, comprising 57 distinct assemblages that span up to 14 millennia. Thirty-two percent of the assemblages contain one or more human coprolites with intentionally consumed edible insects, indicating that almost a third of past subsistence economies of the Americas incorporated insects into their diets. The samples containing edible insects also demonstrate that 4% of the average diet consisted of insects. These results reveal that insects were a common part of early subsistence economies in the Americas and were unlikely to have been the starvation food many Western scholars often assume.

Junco, Roberto and Iris del Rocío Hernández Bautista (INAH)

[158]

Contexts and Meanings of Prehispanic Underwater Offerings Discovered in the Volcanic Lakes of Nevado de Toluca, Mexico

Nevado de Toluca is a volcano located in the central region of Mexico. At 4,200 m asl, there are two lakes inside its crater with evidence of rituals and prehispanic offerings. Archaeological evidence, recorded by both underwater and terrestrial archaeological practices, indicates a close symbolic relationship between water, meteorological forces, and the concept of the sacred Mesoamerican mountain. Due to the physical and chemical characteristics of the water, organic materials have been exceptionally preserved, like copal, maguey leaves, pine leaves, basketwork, and plant fibers. In this lecture, we present the context and meanings of these offerings to understand the ritual practices in their entirety considering ecological environment, prehispanic worldview, and the relationship of human groups with water.

Junginger, Chris [99] see Sammons, Claire

Jurado, Alexander

[273]

Lifeways at the Onset of Urbanization in Central Mexico: Initial Findings from Ceramic Analysis and Residential Excavations at Middle Formative Tlalancaleca, Puebla.

Tlalancaleca is located in the western reaches of the Puebla-Tlaxcala Valley in Central Mexico and was one of the region's largest urban centers during its apogee in the Terminal Formative period (100 BC–AD 250). The pathway to this urban apogee is less well understood but a promising area of inquiry lies in the process of population aggregation that occurred at Tlalancaleca between 650 and 500 BC. In other world regions, archaeologists have hypothesized that population aggregation was a generative process that expanded inhabitants' consumption opportunities, social networks, and offered novel opportunities for ritual and social differentiation. In this paper, I evaluate to what extent these variables changed through the course of aggregation at Tlalancaleca using ceramic data from a Texoloc phase (650–500 BC) supra-household structure at Tlalancaleca. I compare ceramic types and vessel forms between Tlalancaleca and Tetel, a contemporaneous non-aggregated village in the region, as an additional avenue for evaluating changes at Tlalancaleca during aggregation. In doing so, I present preliminary interpretations on inhabitants' lifeways during the aggregation process and their implications for urbanism and conceptualizing the “urban” and “rural.”

Jurado, Erik, Carolina Meza Rodriguez (INAH Morelos), Mario Cordova Tello (INAH Morelos) and Gerardo Gutiérrez (University of Colorado, Boulder)

[273]

Revisiting Eastern Morelos and Teotihuacan: Recent Research at San Ignacio, a Regional Center in Teotihuacan's Rural Countryside

San Ignacio is located in the Amatzinac Valley of Morelos, approximately 10 km south of the Formative site of Chalcatzingo, where it was the regional center and largest site in Eastern Morelos during the Classic period (300–600 CE). Previous studies argued based on regional settlement data that San Ignacio was a possible Teotihuacan administrative center. The Proyecto Arqueológico Mapeo y Prospección de San Ignacio

(PAMPSI) began in 2019 to investigate this hypothesis and the nature of San Ignacio's relationship with Teotihuacan. In this paper, we summarize initial findings from the first two seasons of fieldwork undertaken in 2019 and 2023, which entailed site mapping, surface collections, stratigraphic test excavations, and ceramic analysis. We present preliminary interpretations of San Ignacio's occupation, internal organization, and relationship with Teotihuacan. We propose directions for future research as long-term study of San Ignacio will be key for understanding Classic period societies outside of the Basin of Mexico, particularly those of Morelos, and Teotihuacan's local impact on social identities, ritual practices, and political-economic activities around Central Mexico. Initial findings and future research by PAMPSI will further discourse on Teotihuacan interaction and contribute new data to theories of Teotihuacan polity organization and urbanism.

Jurado, Nessel [281] see Dalton, Jordan

Kabata, Shigeru [273] see Murakami, Tatsuya

Kabukcu, Ceren (University of Algarve, ICArEHB)

[217]

Prehistoric Hunter-Gatherer Plant Food Use in the Northern Zagros: New Evidence from Carbonized Plant Macroremains

Research on plant remains over the past two decades increasingly point to the importance of plant foods in Paleolithic hunter-gatherer subsistence. In this paper I will present recent results of archaeobotanical research on carbonized plant macro-remains from late-Middle, Upper Paleolithic and Epipaleolithic sites located in the northern Zagros Mountains. The evidence to date supports a long-term reliance on wild pulses and nuts in this region. In addition, evidence from carbonized fragments of prepared food items indicate complexity and diversity of culinary practices, including the multistep preparation of plants with unpalatable and potentially toxic compounds. I will discuss this evidence in relation to plant resource choice in the context of hunter-gatherer occupations in Southwest Asia and the broader Eastern Mediterranean.

Kahn, Jennifer (College of William and Mary)

[303]

A Geospatial Analysis of Sacred Trees and Archaeological Sites in the Precontact Society Islands (French Polynesia)

Archaeological, anthropological, and historical sources speak to the importance of particular tree species for ceremonial and quotidian use in precontact Polynesian chiefdoms. Archaeological studies have largely discussed the spatial association of trees and archaeological sites in an ad hoc manner, thus more refined spatial analyses are needed. I fill this lacuna with an in-depth geospatial analysis of tree distribution and archaeological site distribution from the 'Opunohu Valley, Mo'orea, Society Islands. A full coverage survey recorded data on spatial relationships between 39 site complexes and over 1,800 trees. Here, I examine the spatial distribution of five native and Polynesian introduced tree species in relation to residential and ceremonial archaeological complexes. I question if ethnographically and ethnohistorically identified sacred tree species are more often associated with elite residential sites or elite ceremonial and ritual sites, are tree species with more general daily economic use more often associated with residential sites than ceremonial sites, and finally, are sacred trees more often associated with secondary elite political centers than more isolated ritual or specialized sites? The data point toward the complex ways in which the Mā'ohi intentionally planted symbolically charged tree species in or around secondary ritual centers and specialized ritual contexts.

Kahn, Jennifer [129] see Donovan, Caroline

Kajjankoski, Phil [269] see Bales, Emily

Kalinkos, Lia (Queens College), Marc Wolf (Indiana University) and Timothy Pugh (Queens College and the Graduate Center, CUNY)

[110]

Architecture and Hydrology: Defining the Sacred Landscape of the Tayasal Hinterland amid the Shores of Lake Petén Itzá, Guatemala

Recent lidar survey of the Tayasal Peninsula in the Petén region of Guatemala revealed a collection of residence groups, situated on ridges of higher ground and separated by possible waterways of lower elevation. These suburb-like communities stand 2 km from Tayasal's urban core. They include structure compounds arranged into a series of larger communities—perhaps neighborhoods, villages, or specialized activity areas. Some of these architectural groupings follow the contours of the terrain down toward lake edges, enhancing the hydrological context of the surrounding environment. In conjunction with the lidar survey, segments of this area and additional features like drainage areas and defensive walls have been ground-truthed, and support conceptions of the residential nature of these settlements. Further study of this area as a residential subset of the Tayasal architectural assemblage has great potential to contribute to the ongoing conversations regarding Maya spatial organization and corresponding geopolitics. The positioning of these settlements and their relationship to water is a key area of study, and further analysis will contribute to a more thorough understanding of resource management and its implications for the characterization of these outlying communities.

Kallenbach, Elizabeth (Museum of Natural and Cultural History, University of Oregon) and Richard Rosencrance (University of Nevada, Reno)

[29]

Northern Great Basin Cordage: A Regional Overview of Chronology, Technology, and Materials

Fiber technologies in the North American Great Basin have incredible antiquity and diversity, including fine cordage, rope, and braids spanning at least the last ~13,000 years. The Museum of Natural and Cultural History, University of Nevada, Reno, Nevada State Museum, and the Lakeview Bureau of Land Management have spent considerable effort in the past two decades compiling and obtaining new radiocarbon dates on fiber cordage from across the region with data on over 120 individual items. In this paper we discuss new radiocarbon dates in tandem with plant identifications and technological analyses from the Connley, Paisley, and Cougar Mountain Caves in central Oregon alongside existing data. This provides an updated regional and diachronic perspective of plant selection, new clues to the decision-making process in cordage technology, and novel insights into cultural change, adaptation, and innovation in the Great Basin.

Kamp, Kathryn [100] see Wheeler, Ryan

Kamp, Kathryn [306] see Whittaker, John

Kamp-Whittaker, April [303] see Clark, Bonnie

Kan, Yu-chun (University College London)

[179]

Materialities of Boiling and Steaming: SEM Microscopic and Experimental archaeological Study on East and Southeast Asian Cooking Technologies

Archaeological and ethnographic data indicates that East and Southeast Asian cuisines have long been characterized by diverse boiling and steaming repertoires and techniques. These practices and resulting flavors and texture of foods are imbued with rich sociocultural meanings. This paper explores charred food remains as an “ecofactual artifact.” By applying a “life-history” approach, the transformation process of cooking and various food materialities can be compared and differentiated microscopically under SEM. Following the rising academic interest in the once-overlooked amorphous charred food remains from archaeobotanical flotation samples or ceramic food crust, this research focuses on the SEM microscopic approach to boiled and cooked cereal food,

aiming to provide a referential dataset to study past cooking technologies archaeologically. Based on existing ethnographic data and historical resources, a food categorization framework is formulated. Controlled cooking experiments of different boiling and steaming techniques were carried out at Butser Ancient Farm, followed by controlled carbonization. The resulting cooked cereal products were described through SEM observation to differentiate modes of boiling and steaming of East/Southeast Asian prehistoric cereals, such as rice (*Oryza sativa*), foxtail millet (*Setaria italica*) and broomcorn millet (*Panicum miliaceum*).

Kandel, Andrew [308] see Kelly, Robert

Kansa, Eric (Open Context)

[63]

Discussant

Kansa, Eric (Open Context), Sarah Witcher Kansa (Open Context; UC Berkeley), Joshua Wells (Indiana University, South Bend), Kelsey Noack Myers (US Army Corps of Engineers) and Stephen Yerka (Eastern Band of Cherokee Indians THPO)

[253]

A More Sustainable and Ethical Foundation for CAREfully FAIR Data in Archaeology

Archaeologists generate vast amounts of data in the form of databases, media files, spreadsheets, GIS files, reports, articles, and other literature. However, despite years of advocacy and data management investments, archaeological information is still poorly curated, scattered, incompatible, and haphazardly preserved. Despite these challenges, David Anderson led projects that demonstrated the value of aggregating and reusing such data at scale. The Paleoindian Database of the Americas (PIDBA) and the Digital Index of North American Archaeology (DINAA) yield important outcomes in scientific understanding and cultural heritage conservation. Anderson's projects show how dedication can enable small teams and modest budgets to have big impacts. We need strategies to make these successes more routine, sustainable, and aligned to both the CARE and FAIR data principles. First, the widespread use of persistent identifiers will better maintain the provenance and contextual integrity of archaeological data. Second, new open-source software, especially the Arches Project (specifically designed to meet unique demands of the cultural heritage sector), can better sustain good practices while promoting autonomy, including data sovereignty for Tribal nations. These developments can support inclusive governance that protects and manages access controls to culturally sensitive data while selectively and strategically sharing information that advances shared goals.

Kansa, Eric [85] see Kansa, Sarah Witcher

Kansa, Eric [173] see Wells, Joshua

Kansa, Sarah Witcher (Open Context) and Eric Kansa (Open Context)

[85]

Archaeological Legacy Data and Archaeological Data Legacies

Although digital repositories are well established, many researchers still use informal ways to share data, such as email. This type of sharing runs a great risk of information loss because data is often not well documented or formally described. One could argue, in fact, even new data is legacy data if it is shared in this way. That is, legacy data is not just the data in notebooks or in old file formats on hard drives; it's also any data we create that isn't easy for others to access or use. If we all agree that data sharing and access is important for our discipline, we need to stop creating legacy data and find ways to improve the intelligibility, interoperability, and longevity of the data we create. Rather than discuss technological solutions to this problem, this talk highlights the role that people play in improving data sharing and understanding. We use the publication of Richard Redding's zooarchaeological data from Giza to share step-by-step guidelines for data documentation, description, and cleaning as an example of working with archaeological legacy data to establish archaeological data legacies.

Kansa, Sarah Witcher (Open Context)**[280]***Moderator***[238]***Discussant*

Kansa, Sarah Witcher [253] see Kansa, Eric

Kansa, Sarah Witcher [85] see Lau, Hannah

Kansa, Sarah Witcher [173] see Wells, Joshua

Kanzawa-Kiriyama, Hideaki [53] see Shimada, Izumi

Kaplan, Emily [37] see Young, Michelle

Kappers, Michiel [60] see Giovas, Christina

Kardulias, Drosos (University of Michigan)**[233]***From Enfilades to Medieval Caves: An In-Progress Report from the Medieval Roman Archaeological Survey of Kalymnos*

The Aegean island of Kalymnos was unsurprisingly transformed by conflict between Roman and Arab Caliphate forces through the early Middle Ages; atypically among its neighbors, the end of antiquity seems to have produced a more durable and connected Kalymnian community, compared to that which came before. This paper expands on earlier GIS analyses of the island's Roman remains through the recording of undocumented sites and external features of previously known locations. Substantial attention is paid to distinctive emerging tactical trends in fortification architecture, as well as the issue of transport through such a rugged coastal environment. Of special note is the network of previously unrecorded high ground lookout posts which facilitated contacts both among the communities of the island, and from Kalymnos to the broader empire. Operating in the restrictive Greek system, the Medieval Roman Archaeological Survey of Kalymnos project is also a case study in "agile archaeology," utilizing many vectors of analysis to build a picture of the past without excavation or remote sensing. Through the use of lay informants, consultation with museum personnel, and participation of Greek university students, the project aims to maximize involvement of the local community, while minimizing its impact on the archaeological record.

Kardulias, Drosos [17] see Kardulias, Paul Nick

Kardulias, Paul Nick (College of Wooster)**[17]***Chair***Kardulias, Paul Nick (College of Wooster) and Drosos Kardulias****[17]***Imperial Water: Fountains as an Expression of British Colonial Control in Cyprus in the Nineteenth and Twentieth Centuries*

As part of the ethnoarchaeological component of the Athienou Archaeological Project (AAP), a team has conducted a survey of the public drinking fountains built in the town of Athienou in central Cyprus during the British colonial period. The research accompanies other field investigations to create a holistic examination of the community situated at the southern end of the Mesaoria, a fertile agricultural plain in the heart of the island. The semiarid summer climate makes access to water a major concern of the residents of Athienou. A

number of public fountains scattered throughout the town are a remnant of the British colonial presence in the twentieth century. Since 2016, an AAP team has recorded all of the extant fountains and several preserved ceramic water lines, and examined plans held by the director of the town's physical plant. The fountains reflect an effort to enhance a vital public service while simultaneously leaving an imperial imprint to clearly mark their origin. The features can be seen as the effort of a core to demonstrate the benefits of colonial status.

Karine, Taché [189] see Bilodeau, Anne-Julie

Karligkioti, Anna (Cyprus Institute; American School of Classical Studies at Athens) and Jane Buikstra (Arizona State University)

[241]

Death and the City: Funerary Practices and Social Transformations during the Archaic Period in Greek Poleis and Beyond

The abundance in textual sources and richness of its archaeological record make Athens one of the most studied Greek cities during Classical Antiquity. However, research has focused principally on Athens, leaving much of the periphery of the Classical world largely unexplored. Scholars have mostly focused in Classical period assemblages, while only little attention has been placed to the precedent period. Furthermore, studies concerning the Archaic period funerary record are rather scarce, both in Athens and elsewhere. Lastly, bioarchaeological studies of respective contexts are greatly absent. Humans are physical mediators of the interaction of cultural and natural phenomena, thus, by combining bioarchaeological data with the burial record, valuable insights can be gained regarding sociopolitical transformations diachronically. The present paper aims to offer a first synthesis of recent and older publications with regard to the funerary and demographic data in order to explore social transformations in Greek poleis at the advent of city-state formation. Emphasis is placed in data coming from the Attic peninsula and the Phaleron cemetery, which is the focus of the present theme session.

Karligkioti, Anna [241] see Hayes, Leigh

Karmowski, Jacek [80] see Slusarska, Katarzyna

Karrar, Osman, Jonathan Haws (University of Louisville), Alvis Barbieri, Milena Carvalho (ICArEHB, Universidade do Algarve) and Nuno Bicho (ICArEHB, Universidade do Algarve)
[265]

Between the Nile and the Desert: the Middle Stone Age of Kerma Region, Northern Sudan

The Nile valley, its associated drainage system, and the adjacent Sahara are thought to have been part of the Anatomically Modern Humans (AMH) dispersal routes out of Africa during the Middle and Late Pleistocene. Building on the pioneering prehistoric work of Marks and colleagues in the early 1960s in northern Sudan, we present the results of the 2019 and 2022 fieldwork of the DIASPORA project (Early Human Migrations and the Nile Valley: The Kerma Region during the MSA). This poster focuses on site location of the sites discovered in the eastern hinterland of the Kerma region near the Third Nile Cataract in northern Sudan. Archaeological data indicate that most sites are dated to the Middle Stone Age, including well-stratified rockshelters and quarry sites, as well as rare rock art locations and scattered cemeteries from more recent chronologies. Preliminary lithic finds reflect the presence of core reduction Nubian technology and typical Levallois. This study suggests greater techno-typological and raw material exploitation diversity during the MSA in the study area. This will contribute to the identification and possible tracing of the pathways of the spread of AMH in the Nile valley.

Kassabaum, Megan (University of Pennsylvania) and Alexandria Mitchem (Columbia University)**[140]***Looking Beyond Consumption: Archaeological and Ethnohistoric Approaches to Interpreting Sweetgum Use at Coles Creek Mound Centers*

The role of non-food plants in human history is a growing area of research for paleoethnobotanists. In this paper, we develop and present a multi-pronged method for exploring non-subsistence human-plant interactions in the archaeological record, using a case study from the American Southeast. The archaeological record of the Lower Mississippi Valley represents a long history of indigenous people making wide and variable use of the region's exceptionally rich ecosystem. Often, archaeological interpretations of these interactions focus on subsistence and do not take into consideration non-food uses of plants and animals. Our excavations at two Coles Creek (AD 750–1000) mound centers, Feltus and Smith Creek, yielded curious concentrations of sweetgum (*Liquidambar styraciflua*) in addition to the expected suite of plants. In this paper, we outline important advancements in our ability to recognize sweetgum in the archaeological record and synthesize pre- and postcontact ethnobotany to hypothesize about how and why Coles Creek people used this plant in ceremonial activities taking place at mound centers. We then reflect on the importance of such methodologies in allowing archaeologists to more fully explore non-food plant use in a variety of contexts.

Kassabaum, Megan [6] see Smit, Douglas

Kassadjikova, Kalina (UC Santa Cruz), Mark Horton (Royal Agricultural University, Cirencester, UK), Cat Jarman (Royal Agricultural University, Cirencester, UK) and Lars Fehren-Schmitz (UCSC Paleogenomics)**[233]***A Paleogenomic Investigation of Historical Human Skeletal Remains from Rapparee Cove, North Devon, UK*

In 1997, human bones were discovered ashore at Rapparee Cove in North Devon, United Kingdom. Since then, much news coverage and public speculation has suggested that the remains belong either to French soldiers or enslaved African-descended rebels from St. Lucia who had drowned when the London had shipwrecked off the coast two centuries earlier in 1796. A decades-long international custody battle has ensued for their repatriation and reburial. We report the results of a genetic analysis of a sample of the remains. Results show mitochondrial haplotypes found predominantly in Europe. Population genetic analyses of nuclear genomes show that the individuals had unadmixed ancestry similar to local populations of Devon. These results suggest that the sampled individuals were of local descent, addressing the heated public debate. However, we note that the samples may not be representative of the numerous human remains that have been discovered or remain buried in the surrounding hillsides.

Kassadjikova, Kalina [70] see Shmidt, Zoë

Kater, Thiago (University of São Paulo)**[54]***Chair***Kater, Thiago (University of São Paulo), Jennifer Watling (University of São Paulo), Fernando Almeida (Rio de Janeiro State University) and Eduardo Neves (University of São Paulo)****[54]***Ceramic and Starch Grain Evidence and the Social Factors Behind Pan-Amazonian Occupation Processes ca. 3500 BP*

Human agroforestry and landscaping practices in the Amazon Forest are now well-accepted phenomena among Amazonian archaeologists. Along the Amazon River, the oldest evidence of visible landscape modifications is largely associated with contexts in which pottery from the Pocó-Açutuba Tradition is identified, from 3500 years BP. This tradition, in accordance with the archaeological literature, also appears

to be the first material assemblage that was widely dispersed throughout different regions of the Amazon basin. For this presentation, we wish to consider and to reflect on some social factors that could have acted in this process. To achieve this aim, we share some results of techno-morphological analysis of Pocó-Açutuba ceramic assemblages excavated from archaeological sites on the Madeira River, as well as some starch grain evidence associated with pottery residues. The dataset informs us about a consistent vessel morphology and possible related feasting functions, which have several implications when considering the occupational processes that unfolded during the period.

Katz, Jared (University of Notre Dame)

[322]

Discussant

Katzman-Tranah, Lucille [99] see Heigel, Darren

Kaufmann, Cristian [200] see Gutiérrez, María

Keeney, Joe [174] see McCaig, Haley

Kehoe, Alice (Retired Scholar)

[129]

Discussant

Kehoe, Alice (Retired Scholar)

[166]

Archaeology, a Historical Science of Multiplicities

During the Cold War of the twentieth century, the coterie of scientists at Los Alamos who had developed nuclear bombs continued their dominance through creating the National Science Foundation and the Santa Fe Institute. NSF science is laboratory-based physical sciences, manipulating “the tiny” as Derek Turner says. Its extreme form would be Hempel’s hypothetico-deductive procedure, which Lewis Binford advocated. Historical sciences (archaeology, paleontology, geology) are radically different: their data are truly “givens,” to be interpreted by analogies with ethnographically observed and historically described communities. Every dataset results from historical contingencies, an infinitude of multiplicities. This understanding of histories fits demands from non-Western nations for recognition of their historical knowledge; it is postcolonial. In this paper, I describe the method of historical sciences and make a distinction between “decolonization” (in which the usually White professional is the agent) and postcolonialism that recognizes the validity of the many realities resident in languages and cultural knowledge.

Keim, David [244] see Anderson, Siobhan

Keim, David [156] see Radillo Rolón, Diana

Kellett, Lucas (University of Maine, Farmington)

[248]

Redefining the “City” during a Time of Risk: The Site of Achanchi and the Chanka Heartland of Andahuaylas, Central Highland Peru (1000–1400 CE)

Traditional models of ancient cities have dominated archaeological discourse for nearly a century. This paper seeks to diversify definitions and assumptions regarding ancient cities, especially during periods of heightened

economic and social risk. Using the large Late Intermediate period (1000–1400 CE) ridgetop site of Achanchi in the Andahuaylas region of southern highland Peru, this paper presents a snapshot of “city” life, but contextualized within the highland Andean region during a period of dynamic change. This paper argues that the site of Achanchi encapsulated some, but not all characteristics and functions of a typical ancient city, yet played a critical, multifaceted role (e.g., refuge, economic center, burial ground) among local Chanka populations during a discrete time of overlapping risks linked to drought, warfare, and political factionalism.

Kelley, Alice

[310]

Chair

Kelley, Alice, Allen Gontz (Clarkson University, Potsdam, NY), Dan Sandweiss (University of Maine, Orono), Henry Tantaleán (National University of San Marcos, Lima, Peru) and Christine Bergman (University of South Florida, Tampa)

[310]

Tectonic Origin of Desert Wetlands at Pozuelo, Peru

The Pozuelo site, one of the oldest in the region, is composed of four Formative period mounds (circa cal yr 1230 BCE) in southern, coastal Peru. Archaeological excavations at the site exposed both mound and pre-mound stratigraphy. Sediments beneath the mound showed a sharp transition from alluvial fan/eolian sediments to a thick (approx. 1 m) clay deposit containing evidence of freshwater plants. Discovery of this wetland environment was unexpected in what is now desert terrain and has implications for the pre-mound occupation of the area. Hypotheses for the formation of a standing water body include fault-induced topographical and hydrological changes, perhaps influencing a distributary channel, in this tectonically active region. In 2022, additional excavations revealed clastic dikes associated with earthquake-induced liquefaction cutting the clay layer in sediments beneath a mound. An electrical resistivity tomography (ERT) survey conducted in 2022, showed results consistent with faulting in the area immediately adjacent to and beneath the excavated mound. This information suggests the pre-mound wetlands may be the result of seismically controlled ground warping and water impoundment, followed by disruption by a large magnitude earthquake. Subsequent eolian activity created the sand dune which forms the base of the excavated mound.

Kelley, David [57] see Weinstein, Richard

Kellner, Corina, Jesse Alexander (Northern Arizona University) and Blythe Morrison (Bureau of Land Management, Colorado)

[268]

Isotopic Data from Turkeys (Meleagris gallopavo) at Houck, Arizona (AD 800–1250)

As the only domesticated animal native to the North American continent, analysis of turkey husbandry in the prehistoric American Southwest is important to understand human-avian interaction, foddering techniques, and trade. Direct analysis of turkey remains provides information about their myriad functions. The Houck community of sites is located at 6,035 feet along the Puerco River Valley on the Colorado Plateau in northeastern Arizona (AD 800–1250). Houck was occupied during Chaco Canyon’s peak exhibiting a great house with Chacoan masonry. Previous zooarchaeological studies show that some Houck turkeys were used for gathering feathers. We combine dietary and geolocation isotopic data to analyze aspects of turkey husbandry at Houck from >35 turkeys found in various contexts. Houck turkeys consumed a strong C₄ diet, likely maize fodder (carbon: –8.5‰, nitrogen: 9.3‰). These dietary isotopic values indicate that Houck turkeys were fed maize from fertilized fields, more so than some North American prehistoric turkeys. Houck turkey average strontium value is 0.70965 and few turkeys are out of the range for soil samples near the site, suggesting local breeding. These results indicate a local practice of turkey husbandry at Houck communities during the peak of Chacoan influence. In honor of Jesse Alexander.

Kelly, Harold and Corinne Hofman (Leiden University)**[127]***Archaic Ingenuity through Continuous Change*

Archaic groups worldwide are often categorized as less technically and culturally developed. However, their deep understanding of nature and their environment and ability to translate this knowledge to adapt to new circumstances proves otherwise. Paleoclimatic research in the Caribbean has shown that the region endured significant climate variability throughout the Holocene. Alternating cycles of wet and dry conditions contributed to extreme weather events, which, together with relative sea-level rise, severely impacted the environment, available resources, and the ability of islanders to secure water, food, and shelter. In this paper, we look at Aruba, one of the driest islands in the region, and Saba, located in the hurricane belt of the northern Lesser Antilles. Our research shows that Archaic peoples on both islands were able to continuously adapt their lifeways to the natural hazards and climatic challenges they faced. Through the development of a deep understanding of nature and the building of social relationships, knowledge exchange, and intensive mainland-island and interisland mobility, early settlers introduced sustainable ways to construct their shelters, manage their water supplies, and produce foodstuffs that were adapted to the environmental conditions.

Kelly, Jamie [172] see Silverman, Danielle

Kelly, John (Public Archaeology Laboratory Inc.)**[187]***Between the Shores and the Hills: Precontact Boundaries and Behavior along the Housatonic River in Southwestern Connecticut*

PAL's archaeological investigations along a natural gas pipeline right-of-way in southwestern Connecticut identified a cluster of precontact Native American sites in Newtown situated along Rodericks Brook, a tributary stream to the Housatonic River. The sites include the Canopy Site (97-101), the Alberts Hill Road Site (97-102), and the McLaughlin Vineyard Site (97-106). Rodericks Brook runs along a previously documented lithic watershed and inferred territorial boundary separating the coastal precontact peoples of the lower Housatonic drainage from the interior-oriented groups of the upper river drainage. While the assemblages from these sites contain stone raw materials typical of sites from similar periods in the Lower Housatonic valley, the large volume of burned and heat-treated vein quartz and the caching of bifacial cores is unusual and appears to be unique to the Rodericks Brook drainage. The unusual assemblages may be associated with boundary maintenance between distinct Native American populations along a shared frontier.

Kelly, Mary Kate (Mount Royal University), Caitlin Earley (University of Washington) and Brent Woodfill (Winthrop University)**[230]***Turtles, Faces, and Hieroglyphs: 3D Recording of Monuments from La Tortuga and San Isidro*

The adoption of 3D digital recording strategies at archaeological sites yields numerous benefits: detailed preservation of data while the original may be at risk of damage or erosion, increased visibility of small details, and precise tracking of change over time, to name a few. Additionally, there are nearly limitless possibilities for applications of 3D data, such as producing scale models and accessible virtual versions of artifacts. The Proyecto Arqueológico Sak B'alam has begun implementing digital recording techniques and is envisioning future research and collaborations around these data. Two archaeological sites were studied in the field season of 2023, La Tortuga and San Isidro. A total of nine monuments were photogrammetrically recorded between the two sites: an altar and a stela fragment from La Tortuga; and five hieroglyphic stairway blocks, one panel, and one column altar from San Isidro. In this paper, we discuss the process of digitally recording monuments at La Tortuga and San Isidro, as well as the preliminary results of epigraphic, iconographic, and contextual analyses of the monuments. We also discuss directions for future research, including the ways that digital data can support collaborations with the local communities at each of these sites.

Kelly, Mary Kate [159] see Navarro-Farr, Olivia

Kelly, Melinda [190] see Hitchcock, Robert

Kelly, Robert (University of Wyoming)
[219]

Discussant

Kelly, Robert (University of Wyoming), Madeline Mackie (Weber State University) and Andrew Kandel (Heidelberg Academy of Sciences and Humanities)

[308]

Rapid Increase in Production of Symbolic Artifacts after 45,000 Years Ago Is Not a Consequence of Taphonomic Bias
Researchers have long been aware of an apparently rapid increase ca. 40,000–45,000 BP in the frequency of “symbolic” artifacts in the Old World paleolithic record. However, some hypothesize that if not for taphonomic loss the data would instead show a gradual increase in such artifacts’ frequency during the Middle Stone Age / Middle Paleolithic. We test this hypothesis by correcting the record for taphonomic bias. We find that even after correction, the ca. 40,000–45,000 BP peak remains with no prior gradual increase. However, research bias may explain much of the peak.

Kelly, Robert [219] see Mackie, Madeline

Kelly, Robert [319] see Veres, Matthew

Kelvin, Laura (University of Manitoba) and Lisa Rankin (Memorial University)

[307]

Restoring Relationships: Connecting Nunatsiavummiut to Their (In)tangible Cultural Heritage throughout the World
Settler colonialism is a disruption of Indigenous relationships. As a tool of settler colonialism, archaeology and collecting in particular have caused a disruption of relationships between Indigenous people, their land, their (in)tangible cultural heritage (Gray 2022), their Ancestors, and their pasts, presents, and futures. Over the last 500 years, many archaeologists, academics, tourists, missionaries, and government officials have collected Inuit (in)tangible heritage and Ancestors without Inuit consent. They are now housed in institutions all over the world without applying Inuit understandings of care, love, and respect. In this presentation we discuss how this violent practice has disrupted many different kinds of relationships, as well as projects we work on in collaboration with the Nunatsiavut Government and Nunatsiavummiut communities to work toward restoring those relationships.

Kemp, Brian [131] see Kennedy, Ryan

Kennedy, Jason (Lyon College)

[257]

Chair

Kennedy, Jason (Lyon College) and James Berry (Lyon College)

[257]

Shaping Pots and Minds: Ceramic Experimental Archaeology in an Undergraduate Classroom

The study of archaeological ceramics has relied on a reconstruction of the techno-functional choices made by potters in the past through a *chaîne opératoire* approach. However, the insights gained through this analysis have largely confused or eluded our students due to a lack of practical experience with ceramic manufacture. In the fall of 2023, faculty in anthropology and art at Lyon College collaborated to create a course that

provided students with a hands-on experience in the ceramic production process from the gathering of raw materials to firing to vessel use. The expressed archaeological goal of the course was for students to be able to better understand the technological and functional decisions that potters made in the production process through experimentation. We also aimed to demystify the production of the material world by engaging in the complete chain of ceramic manufacture. This paper briefly presents the course structure and evaluates the efficacy of our experimental design in increasing technical and functional understanding of archaeological ceramic materials. More importantly, we highlight the lessons that we learned from our students in this shared experience.

Kennedy, Ryan (Indiana University), Susan deFrance (University of Florida), Brittany Bingham (University of Oklahoma), Eric Guiry (Trent University) and Brian Kemp (University of Oklahoma)

[131]

The Impact of Fishing and Transportation Technologies on Nineteenth-Century Fisheries and Fish Supply in New Orleans, Louisiana

This paper examines fish supply in late nineteenth-century New Orleans to understand how new fishing and transportation technologies transformed fish trade networks in the Gulf of Mexico and beyond. Previous research has demonstrated temporal and geographic shifts in the city's fish supply, and we extend this work to late nineteenth-century contexts using zooarchaeological, ancient DNA, and stable isotope analyses. The identified species demonstrate rapid and extensive incorporation of multiple nonlocal fishes, especially snappers (family Luthjanidae), beginning in the 1860s. Although the relative abundance of these fishes in nineteenth-century New Orleans can be explained by rising urban populations and increased demand, this trade must also be understood as being enabled by the development and widespread adoption of new technologies including longline fishing equipment, railroad transport, and artificial ice production. These technologies not only allowed for the long-distance shipment of fresh fish at relatively low cost, they also underpinned the development of successive new fisheries such as those targeting Northern Red Snapper in Florida and White Hake in the northwest Atlantic Ocean. Ultimately, we argue that late nineteenth-century transportation technologies revolutionized the trade of fresh fish by enabling shipment of these commodities across continental and transnational scales in ways not previously possible.

Kennedy, Ryan [200] see Bernard, Hayden

Kennedy, Ryan [131] see Foti, Peyton

Kennedy, Ryan [199] see Ho, Joyce Wing In

Kennedy, Ryan [199] see Ho, Percy Hei Chun

Kennedy, Ryan [89] see Richter, Kristine

Kennedy, Ryan [199] see Schwartz, Soul

Kennedy, Sarah (Carleton College)

[26]

Discussant

[26]

Chair

Kennedy, Sarah (Carleton College), Maria Smith (Civil & Environmental Consultants Inc.) and Di Hu (James Madison University)

[26]

Mining Datasets and Weaving Diverse Contexts: A Multisite Comparison of Indigenous Forced-Labor Compounds in Colonial Peru

The Spanish Empire drew on multiple forms of forced Indigenous labor in their American colonies during the sixteenth–eighteenth centuries. In the Andes, forced Indigenous labor was used to mine silver, craft textiles, grow sugar cane, and produce wine, among many other tasks critical to the colonial economy. Crucial to this

system was the ability to obtain (and retain) labor through various mechanisms, such as the mita draft, the encomienda, tribute levies, and slavery. Conditions at these compounds were often brutal, and many fled. While some compounds may have had heavy surveillance and control mechanisms, this has not been fully investigated on the ground. In this paper, we compare spatial and archaeological data from three colonial labor compounds to elucidate patterns and variations in their control, access, and surveillance. The three sites include (1) the Obraje de Chincheros, a textile mill (1670s–1820 CE, Ayacucho, Peru); (2) Pomacocha (1681–1821 CE, Ayacucho, Peru), and (3) Trapiche Itappalluni, a silver refinery (1650–1800 CE, Puno, Peru). By combining multiple datasets, a range of labor contexts, and intra- and intersite comparisons, we interrogate the classic Foucauldian ideal, highlighting the diversity of layouts, surveillance, and architectural choices throughout this time period.

Kennedy, Sarah [199] see Eslinger, Emmalee

Kennedy, Sarah [100] see Kucur, Ezra

Kennett, Douglas [42] see George, Richard

Kennett, Douglas [295] see Hoggarth, Julie

Kennett, Douglas [217] see Prufer, Keith

Kennett, Douglas [217] see Robinson, Mark

Kennett, Douglas [128] see VanDerwarker, Amber

Kenny, Patricia (University College Dublin)

[170]

Secrets in the Stones: Stones with Inclusions in the Passage Tomb Tradition

The passage tombs of Atlantic Europe are a lasting memorial to a society with a knowledge system encompassing aspects of engineering, astronomy, and stone-working. The stones used to build these monuments have been explored from a range of perspectives. It seems likely that stones were chosen based on criteria such as color, source, and texture, and some may have had symbolic meaning. This paper investigates the presence of stones with geological inclusions at these sites and asks whether such stones were socially significant. Stones with geological inclusions (SWI) can be defined as structural stones with fossils, mineral veins, or rock clasts embedded within them. Anthropological research demonstrates that unusual stones, such as these, are sometimes attached to origin myths and broader belief systems. This research considered whether the presence of SWI in Neolithic monuments indicates comparable beliefs in Neolithic communities. This paper draws primarily on fieldwork in Ireland, with smaller case studies in Britain, and Brittany. It demonstrates that SWI use is patterned, and sometimes used to reference geological features. Finally, this paper questions what SWI can tell us about Neolithic people and their worldviews.

Kenoyer, Jonathan (University of Wisconsin), Randall Law (University of Wisconsin, Madison) and Laure Dussubieux (Field Museum of Natural History)

[86]

Carnelian Beads from the Site of Kish, Iraq: Differentiating Indus and Non-Indus Carnelian Beads Using Technological, Morphological, and Chemical Analysis

Carnelian beads from the site of Kish, Iraq, include a wide range of bead types, including locally produced short cylindrical beads and long biconical beads that are thought to have been produced in the Indus region of South Asia. Beads from different excavation contexts can be dated to a wide range of time periods, between 2800 BCE and CE 200–600. Numerous different styles of beads were produced using multiple production processes that can be associated with both local workshops and workshops in South Asia, Egypt, and Iran. Using the scanning electron microscope (SEM) to study drill hole casts, it has been possible to differentiate some of the major drilling techniques associated with different regions. These techniques include percussion/pecking, tapered stone drilling, constricted stone drilling, and copper drilling with abrasives and diamond-tipped drills. Selected beads from different time periods were also analyzed chemically using LA-

ICP-MS at the Field Museum to determine the possible source areas that the raw carnelian was derived from. The results of these multiple analytical approaches will be presented to demonstrate that earlier assumptions regarding the distribution and sourcing of carnelian beads are much more complex than earlier scholars had proposed.

Kent, Jon [94] see Farmer, Reid

Kentridge, Robert [141] see Meyering, Lisa-Elen

Kenyon, Kim [154] see Cranford, David

Kerr, Sarah (University College Cork)
[22]

New Approaches in Buildings Archaeology: An Examination of Late Medieval Lodging Ranges

Buildings archaeology somewhat lags behind the broader discipline of archaeology in its adoption and creation of new theoretical propositions possibly due to the misconception that the built environment lies solely in the remit of architectural historians rather than archaeologists. It is not, however, sitting stagnant: a number of new approaches and key theories are influencing the study of buildings, such as the theory of space, phenomenology, and affect theory. This paper details the use of these methods in the examination of lodging ranges—the earliest examples of quasi-private spaces in the late medieval great house—to consider the buildings' form, function, use and meaning. These methods reveal varying sensory perceptions and the creation of illusory architecture and deepen our understanding of social distance and identities within the late medieval great house; this in turn provides an insight into the medieval lived experience.

Kersel, Morag [139] see Rowan, Yorke

Kessler, Nicholas [176] see Larrick, Dakota

Kestle, Calen [105] see Hills, Kendall

Keyser, James (Oregon Archaeological Society)
[156]

Leaving a Calling Card: Why Is This Rock Art Here?

Plains warfare is well known for its “gamesmanship” aspect, but one of the less emphasized parts of that is the practice of leaving a “calling card” flouting your entry into an enemy’s territory and your success against him. Recent research has located more than a dozen “out of place” northern Plains rock art sites. These are best explained as calling cards, carved or painted by marauding raiders in enemy territory for the purpose of taunting their enemies.

Khaghani, Victoria (Tulane University; Brandeis University), Whitney Goodwin (University of Missouri Research Reactor) and Marcello Canuto (Tulane University)
[276]

Iconographic and Material Comparative Analysis of Ulúa Valley Polychromes

This thesis explores the relationship between iconography and material analysis of Ulúa polychromes in

Honduras between 450 and 1200 CE. From a dataset of 56 ceramic pieces, first analyzed iconographically, which has been the main form of analysis for these artifacts. Second, the 56 pieces were sampled for INAA and processed through a computer program. The purpose of using these two analyses is to see if past iconographic analysis holds firm in its assumptions of representing group identity as well as how these iconographic elements represent group dynamics among the Ulúa Valley. Chapter 1 details the historical context around the Ulúa Valley. Iconographic analysis of 56 samples is defined in Chapter 2. Chapter 3 introduces the instrumental neutron activation analysis process while Chapter 4 establishes the initial data findings. Chapter 5's discussion goes in depth to compare iconographic and material processes for samples and their corresponding groups. Chapter 6's concluding notes bring each group into a structural context of the Ulúa Valley and how the samples can tell us how these groups may present themselves in physical spaces. Through this research and the use of both analyses, there is a varied expression of samples even if composition is similar.

Khan, Faizan (University of Texas, Austin)

[171]

Identifying Ancient Intra-Monastic Pathways among Gandharan Buddhist Sites through GIS

This project focuses on identifying pathways between sites of the Gandharan Buddhist Civilization with the help of GIS technology to identify the locations of as-yet unfound Gandharan archaeological sites, which are under the threat of becoming permanently destroyed due to rapidly growing urbanism in the region. This project employed GIS principles and techniques for executing a least-cost analysis between the two major Gandharan Buddhist temple complexes of Mardan and Taxila. The project used ArcGIS Pro software to perform GIS analysis and produce maps. The project used 30 m Aster Global DEM data from the EARTHDATA database of NASA. The project used the metabolic cost of walking for humans to create least-cost paths between the two sites. The result of the project identified more than one possible route between these Gandharan sites for Buddhist monks and other people to travel by foot. This project provides the baseline for archaeologists to do Lidar or field surveys along the proposed paths to discover additional Gandharan Buddhist archaeological sites.

Khurelsukh, Sosorbaram [151] see Ventresca-Miller, Alicia

Kibler, Karl

[336]

Discussant

Kidder, Tristram (Washington University)

[1]

Four Thousand Years of Disaster, Vulnerability, and Resilience in the Lower Yellow River, China

For the past 4,000 years, humans have assaulted the environments of the lower Yellow River Valley. For millennia this region has been an entirely cultivated and (mis)managed anthropogenic landscape. Indeed, the lower Yellow River is called the "river of sorrow" and flows through a land of famine. At the same time, though, it is a land of remarkable resilience. Today this area is home to some of the densest populations on earth and is a self-evident human success story. How do we understand this paradox of vulnerability and resilience? The lower Yellow River valley provides an instructive case study for exploring long-term interactions of societies and their environments. Specifically, this region provides an opportunity to think about the nature of human adaptive capacity in the face of repeated natural disasters. Using archaeological and historical data on long-term human-environmental interactions from the end of the Neolithic into the Dynastic period, I document how shifting human and environmental fortunes are literally and metaphorically sedimented in the alluvial floodplain. This work illustrates how success and failure are contextual; these states are the outcome of human choices and transformations of social and environmental relations.

Kidder, Tristram (Washington University), Seth Grooms (Appalachian State University) and Maggie Spivey (University of Alberta)**[24]***Radical Cosmological Ritual Intervention at Poverty Point*

The Poverty Point site in northeast Louisiana is unique—in size, monumental architecture, artifact content, and history—and the site defies standard functional explanations for hunter-gatherer settlements. In contrast to existing concepts arguing that the site's monumental constructions were built over hundreds of years to express political and economic power by a limited group of people, our data suggests the earthworks were built rapidly over an exceptionally brief span of months to perhaps a year by a large voluntary labor force drawn from across eastern North America. We hypothesize that Poverty Point was a place of revelation; the construction of the earthworks was a radical, cosmological ritual intervention, spurred by perceptible climate and environmental changes across the Southeast after ca. 3300 cal BP. The earthworks at Poverty Point are among the materialized remains of ritual performances intentionally initiated by Indigenous people seeking to rebalance an unbalanced world.

Kidwell, Jasmine (Baylor University) and Julie Hoggarth (Baylor University)**[107]***Human Demographics, Paleoclimate, and Paleoecology of Far West Texas from the Late Pleistocene through Holocene*

The vast region of far west Texas remains understudied in terms of its cultural, climatic, and environmental past. Current paleoclimatological and environmental proxy datasets are few and inconsistent in time, resolution, and scope. Here, we summarize key proxy data while contextualizing human demographic variation within the cultural regions of far west Texas. Using radiocarbon dates spanning the earliest dated sites to the arrival of the Spanish, we present summed probability distributions and kernel density estimations of population variation across time and space. Current paleoclimatic and environmental proxy records such as pluvial paleolake levels, isotopic values derived from speleothems and cave sediments, packrat middens, and other proxy data are presented in conjunction with the demographic models. Together, these dataset the stage for contextualizing human behavior and demographic variability from the Late Pleistocene through the Holocene. Through a lens of earth's dynamic systems, we may better understand how the earliest occupants of far west Texas responded to long-term climatological and environmental change.

Kiker, Summer (Jacksonville State University), Douglas Bolender (University of Massachusetts, Boston) and Kathryn Catlin (Jacksonville State University)**[48]***How Many Bone Pins Is a Lot? Material Assemblages at Kotið, a Small Viking Age Dwelling in Iceland*

Icelandic Viking Age archaeological assemblages are notorious for their paucity and limited range of material types. Kotið, a small dwelling dating to the original Viking Age settlement of Iceland, is no exception. In two seasons of excavation, only a handful of artifacts have been recovered; however, three bone pins have been found, and several others have turned up at neighboring small dwelling sites. The abundance of bone pins is unexpected, as most Viking Age domestic sites from Iceland, including large and wealthy farms, have at most one or two. The pins are decorated in a variety of styles and show evidence of skilled production. This poster describes the designs and manufacture of the pins and explores the possible meaning of their relative abundance at Kotið and the neighboring small dwelling sites.

Kilby, David (Texas State University)**[332]***Chair***Kilby, David (Texas State University) and Marcus Hamilton (University of Texas, San Antonio)****[332]***New Perspectives on Bonfire Shelter, Texas*

Bonfire Shelter contains an extensive stratified record of human prehistory in the Lower Pecos Canyonlands of Southwest Texas, and a correspondingly long history of competing interpretations of that record. The initial investigations of the site in the 1960s led to the announcement of the earliest known bison jump in North America, attributed to Plainview and perhaps Folsom hunters. In addition, the shelter was found to contain a ca. 14,000-year-old faunal assemblage with potential human modifications, extensive deposits relating to a Late Archaic bison jump, as well as several intervening occupations. Subsequent investigators questioned some of the original conclusions, particularly regarding the Paleoindian-age deposits, and vigorous debates played out in the literature. Beginning in 2017, the Ancient Southwest Texas project has carried out detailed reexamination of the site, correlating the stratigraphy identified by previous researchers, obtaining new dates, and attempting to address the debates while also providing due attention to less contentious site components. This paper provides a general overview of the history of work at Bonfire shelter, including fieldwork and preservation carried out over the last seven years by ASWT, presents some tentative conclusions, and serves as a foundation for papers on Bonfire Shelter that follow in this session.

Kilby, David [332] see Black, Stephen

Kilgore, Claire (University of Wisconsin, Madison)

[115]

Picturing the Written, Read, and Spoken Prayers to Zell: Devotional Therapeutics for (In)Fertility and Motherhood at Mariazell

In the mountains of the Austrian province of Styria, the Catholic pilgrimage shrine of Mariazell claimed many healing miracles during the later Middle Ages (ca. 1200–1550). Notably, many of these miracles address ailments of fertility and parenthood, including infertility, miscarriage, stillbirth, and infant death. Early sixteenth-century visual culture of the Mariazell site not only visualizes the shrine's diverse range of intercessory capabilities, but also the desired method of intercession: verbal pleas to Our Lady of Zell. These formulas appear in brief inscriptions written below the painted and printed images of the shrine's miracles. The texts provide specific details of the ailment that prompted intercession followed by the solution of seeking aid from Our Lady of Zell and devotion to her shrine. By analyzing the iconography and language of Mariazell's devotional visual culture alongside contemporaneous treatises on medicine and health, this paper argues that the combination of devotional text and image function as an instructive form of healthcare for circumstances of reproductive affliction. I further argue that the Mariazell miracle images and their accompanying inscriptions reveal an expansive attitude toward the types of ailments affecting the reproductive body and appropriate methods of treatment in fifteenth- and sixteenth-century Europe.

Killackey, Katheryn [248] see Vranich, Alexei

Killick, David [121] see Stephens, Jay

Kim, Hwajung [166] see Goulding, Ella

Kim, Jangsuk [256] see Conte, Matthew

Kim, Minjeong [323] see Schwendler, Rebecca

Kim, Nam (University of Wisconsin, Madison)**[56]***Reimagining and Reengineering Political Complexity in Early Vietnam*

Archaeologists continue to be interested in the development of political complexity and early forms of “states.” There is compelling evidence that leadership strategies and political centralization in such polities involved modification and reengineering of both social and landscape topographies, making durable modifications that persist in respective regions. In recognizing the theoretical utility of the state concept, this paper reimagines it by focusing on the process of political centralization and how it can foment both societal change as well as physical alterations to surrounding landscapes. Thinking of the state as ongoing action allows us to better understand the role of centralization in the development of highly complex and large-scale collectives in the human past, and of their environmental footprints. Using a case study from early Vietnam, the paper highlights conditions that resulted in the emergence of the area’s earliest complex society, while also illustrating how the polity radically transformed landscapes as large-scale aggregations of people found new ways to perceive and interact with each other and their ecological surroundings. It explores how political mechanisms reengineered social organization, thus effectively marshaling resources and labor to effectuate permanent sociopolitical and environmental changes.

Kim, Nam [98] see Tripoli, Simone

Kim, Pangu (Seoul National University), Jennifer Bates (Seoul National University), Vikas Singh (AIHC, Banaras Hindu University) and Ravindra Singh (AIHC, Banaras Hindu University)
[256]*Experimental Study of Lentil Taphonomy in Gangetic Early Farming Period to Understand Culinary Practices*

Archaeological studies can uncover various foods associated with different cultures, where species selection holds ecological importance and preparation/consumption bear cultural significance. Regrettably, there is a shortage of research on food-related behaviors. This is especially true in the India Gangetic Early to Developed Farming periods, despite the excavation of numerous crops, native and exotic alike. Recent findings at the site of Sakas in Uttar Pradesh have uncovered diverse assemblages, including lentils which show taphonomic changes, yet our knowledge about how they were used in their dietary culture remains limited. To address this gap, we conducted an experiment aimed at reconstructing culinary behaviors. We evaluated how various cooking techniques influenced the structure of the seeds, comparing them with the archaeological material. Our results suggest that soaking in water or roasting methods closely align with the archaeological context, warranting further investigation. Considering that lentils in the Ganges were a non-native crop, it is likely they were unfamiliar to people at the time. By examining their preparation and change over time, we can gain insight into how people responded to a new ingredient. This sheds light on the cultural aspects of food preparation and offers a fresh perspective on understanding prehistoric subsistence economies.

Kimbell, Jennifer (Terracon Consultants Inc.), Catherine Jalbert (Terracon Consultants Inc.) and Victoria Pagano (Terracon Consultants Inc.)**[43]***Archaeological Investigations at Mission Concepción (41BX12) and the Historic St. John’s Seminary Campus, San Antonio, Texas*

In 1731, Mission Nuestra Señora de la Purísima Concepción de Acuña (Mission Concepción) was constructed along the San Antonio River as part of a larger mission system whereby Franciscan missionaries sought to expand Spanish Colonial influence in present-day Texas through processes of cultural assimilation. Many of Mission Concepción’s associated landscape features were lost following secularization and increased urbanization as the City of San Antonio expanded through the nineteenth and early twentieth centuries. From 2016 to 2019, Terracon Consultants Inc., performed archaeological investigations adjacent to the mission in support of the St. John’s Seminary Redevelopment Project. Terracon identified intact cultural deposits associated with the mission, including portions of the northern compound wall and several midden

deposits. Prior to Terracon's investigations, only small portions of this wall had been relocated and exposed archaeologically, and little was known about the potential for associated deposits. This poster presents preliminary analysis of archaeological materials recovered from contexts along and outside the north wall and discusses how these materials can be interpretively compared with extant archaeological collections from the other portions of the mission system.

King, Adam (SC Institute of Archaeology and Anthropology), Terry Powis (Kennesaw State University), Sheldon Skaggs (Bronx Community College), Christina Luke (Koc University) and Nilesh Gaikwad (Gaikwad Steroidnomics Laboratory LLC)

[83]

Balché Consumption among the Ancient Maya: Bees, Honey, and Ritual Practice

In this paper we discuss our recent absorbed residue study of a marble Ulúa style vase found at the Pacbitun site in Belize. In that study, we detected evidence for the consumption of the ritual drink balché dating to Terminal Classic period (800–850 CE). Consumption of balché is discussed in historic text, recognized in modern practice, and hinted at in Classic period imagery, but ours is the first study to detect it from an archaeological context. Balché is a fermented drink whose two key ingredients are honey and the bark of the balché tree. Compounds in balché bark produce a heightened sense of euphoria and emotional awareness. In modern Mayan ritual practice, balché is consumed at ritual occasions that build community solidarity and contact deities. Christina Luke has argued the imagery on Ulúa vases references creation and are often found in contexts emphasizing placemaking. The consumption of balché from them would have served to contact deities whose approval was required for rituals that ensouled buildings, remade sacred landscapes, and legitimized rulers. Our identification of balché in an Ulúa vase recovered in Belize illustrates the key role that honey and Melipona bees played in ritual practices of the ancient Maya.

King, Amir [14] see Woehlke, Stefan

King, Eleanor (Howard University)

[180]

Discussant

[213]

Chair

King, Eleanor (Howard University), John Cross (Bowdoin College), Michael Brennan (SEARCH Inc.), Christine Taylor (Maax Na Archaeology Project) and Darcie Flanagan (Maax Na Archaeology Project)

[213]

Exploring Prehispanic Maya Marketplaces in Northwestern Belize: NSF Project Overview and Preliminary MNAP Results

The 2023–2024 field seasons witnessed the beginning of an ambitious NSF-funded project to investigate the possible existence of marketplaces in the Three Rivers Region of northwestern Belize. This project is innovative in leveraging information from long-running, independent research programs, localized at different sites, to explore marketplaces using a collaborative, configurational approach. Because researchers had already investigated all the sites targeted by the project, specific techniques varied depending on the information that was missing from a particular site. All, however, used the same set of cross-culturally derived marketplace indicators, searching for those not yet explored by previous field research. Data on soils, botanical remains, and ceramics complemented the information obtained from current and previous survey and excavations. This paper presents an introductory overview of the NSF-sponsored research as well as the results from two sites explored by the Maax Na Archaeology Project (MNAP). One is the large site of Maax Na, the first in this region to reveal initial evidence of an ancient marketplace. There, excavations

further investigated several structures, preliminarily identified as stalls, a shrine, and a marketplace manager residence. The second is the small site of Bolsa Verde, where soil samples and excavations explored different possible marketplace areas.

King, Eleanor [213] see Sullivan, Lauren

King, Jason (Center for American Archeology) and Don Booth (Center for American Archeology)

[204]

Contract Archaeology and the Center for American Archeology

In 1953, Stuart McKee Struever (1931–2022) founded Archaeological Research Inc., the nonprofit organization that would develop into the Foundation for Illinois Archeology and ultimately the Center for American Archeology (CAA), as it is known today. As the institution grew, so too did Struever’s vision of its scope and mission—from a research-focused program into one that could engage all dimensions of archaeological research, education, and public engagement as it does today. One often underappreciated dimension of this expanding vision and suite of archaeological programs is the Contract Archeology Program that would embrace the then nascent discipline of cultural resource management (CRM). Spanning over two decades, “contract archaeology” at the CAA would contribute to the stewardship and preservation of archaeological resources in Illinois as well providing training for future archaeologists and new data for further research and knowledge production. In this paper, we explore the establishment and growth of the CAA’s Contract Archeology Program, its contributions to CRM archaeology, and its legacy, both in the past and present.

King, Jason [204] see Holland-Lulewicz, Jacob

King, Julia

[89]

Discussant

King, Kathryn (University of Arkansas, Little Rock) and Krista Lewis (Appalachian State University)

[45]

Meaningful Small Program Assessment: A Case Study with Dr. Goldentrowels

In smaller anthropology programs, assessing the major cannot be done through statistical comparisons alone. Archaeology in particular presents distinct challenges for efforts at authentic and meaningful assessment. This paper discusses a small anthropology program’s assessment strategy that leverages both quantitative and qualitative approaches. Our scenario-based instrument provides students with a real world proxy to grapple with via a “pop quiz” writing assignment in a senior capstone course. The learning objectives measured center on ethics, including the preservation of sites and working with descendant communities. To avoid giving students with more knowledge of specific archaeological sites an advantage, we elected to create a hypothetical scenario involving a fictional developing country. Meaningful assessment provides useful feedback to the faculty in what areas students are achieving or failing to meet expectations, which can then be used to improve the program and enhance student success. Analysis of assessment data from 2017 to 2023, including two pandemic years in which all anthropology instruction was conducted online, shows that most students are meeting or exceeding expectations, though there is some work to be done, especially with regard to engaging the local community.

King, Stacie (Indiana University)**[143]***Discussant*

King George, Warren [136] see LeCompte, Joyce

Kingrey, Haden (Washington State University), Shannon Tushingam (California Academy of Sciences) and John Blong (Washington State University)**[133]***Evidence for Possible Digging Implements in the Southern Columbia Plateau: Microbotanical Analysis of Stone Tools from a Late Holocene Earth Oven, 45OK1722, WA*

Earthen ovens in the Southern Columbia Plateau are associated with the preparation and cooking of roots and tubers, with evidence dating back to the middle Holocene. Despite issues with the preservation of these plant elements in the archaeological record, researchers can use microbotanical analyses to identify microscopic remains that oftentimes preserve far longer than macrobotanical remains. Archaeologists have used microbotanical analyses to identify plant collection and processing from the residues of stones tools that would have been associated with those activities. We present the results of a multiproxy analysis of starch grains and phytoliths on bifacial flaked tools and ground stone tools excavated by Washington State University field school students at 45OK1722 in 2022. Based on our results, we hypothesize that these bifacial stone tools may be digging implements associated with the collection of roots for a late Holocene earthen oven. These results are significant because our multiproxy methods can identify ancient food collecting and preparation processes with direct botanical evidence from tool residues. These results also acknowledge that local, Tribal communities have collected these plant foods for time immemorial and continue to do so today despite issues with threatened access to these plants and the effects of climate change.

Kingsland, Kaitlyn (University of South Florida)**[14]***The Status of Roman Archaeogaming: Serious Games for Archaeological Education and Outreach of Ancient Rome*

The digital turn in archaeology sees an increased interest in combining gaming and archaeology. Integrating serious games with archaeology demonstrates benefits for the public of all ages and background to learn about the past in the classroom, at cultural heritage institutions, and at home. This paper seeks to establish the current understanding of serious games for education, research, and outreach in cultural heritage and archaeology. Looking specifically at the serious games for the ancient Mediterranean, the research is centered around archaeological games about ancient Rome. In a review of the scholarship and a survey of games, there is a distinct lack of accurate portrayals of Roman cultural heritage and archaeology. As such, the need for public archaeology initiatives that integrate modern knowledge of archaeological materials and analysis about the Romans via a serious digital is expressed. The emerging subfield of archaeogaming establishes that games created by archaeologists are “archaeogames.” The paper seeks to present a pipeline for how archaeogames can be generated through the reuse of digitized archaeological materials, both 2D and 3D, for the purposes of research, education, and outreach.

Kinney, Joseph [203] see Williams, Philip

Kinsella, Larry and Steve Boles (Illinois State Archaeological Survey)**[154]***The Chip-a-Canoe Project: Stone Tools, 40 Volunteers, Over 400 Hours of Labor . . . and It Floats!*

In 2023, a large group of volunteers engaged in an experimental archaeology project to manufacture a dugout

canoe with stone tools. A large tulip poplar was felled with stone axes and the 8,600-pound tree was then transformed with stone axes and adzes into a 1,600-pound, 4 m long dugout. The tree felling and reduction process combined took over 450 hours of labor. Upon completion, the dugout was launched into the Illinois River and manned by several groups, comprised of four volunteers each, for its inaugural float. This process was well documented with numerous paper forms, stopwatches, and video. We provide highlights from this massive undertaking and insights gained on stone tool usage during the production process as well as its performance in the water. After the drying process is complete, it will be on display at the Center for American Archeology in Kampsville, Illinois.

Kinyanjui, Rahab [55] see Waweru, Veronica

Kipfmueller, Kurt [153] see Dunham, Sean

Kipp, Ashley (Virginia Department of Conservation and Recreation) and Lindsey Cochran (Eastern Tennessee State University)

[283]

Remote Sensing Methods to Locate Archaeological Sites through Vegetation Indices on the Florida Coast

Sea level rise is a growing threat to cultural heritage resources. Popular geospatial methods to identify at-risk sites work well for large-scale areas but are often overly laborious for the non-specialist to use and challenging to apply at a site-specific scale. Here, we create a Coastal Canopy Health Model, a method used to locate cultural resources in a nonhomogenous coastal environment using tree health as a proxy measurement for archaeological sites. On the northeastern Florida coast, archaeologists have casually identified a correlation between certain types of vegetation, such as live oak and cedar trees, with shell-bearing archaeological sites. Test sites at the Guana Tolomato Matanzas National Estuarine Research Reserve (GTMNERR) indicated a statistically significant correlation between vegetation health indices and canopy height derived from lidar to detect the locations of archaeological sites in a mixed canopy coastal forest. The Coastal Canopy Health Model performed statistically significantly better than a random sampling at accurately locating known archaeological sites, thus showing promise for locating archaeological resources at risk efficiently and effectively with no-cost data sources.

Kirchner, Helena [179] see Forste, Kathleen

Kirera, Francis [55] see Waweru, Veronica

Kirgesner, Samantha (Ohio State University)

[67]

Climate Change and Archaeological Research: An Analysis of NSF-Funded Archaeological Research Projects

As the current climate crisis intensifies, requests for proposals of grant funding related to solutions addressing these issues have increased. For over a decade, there has been a push to integrate archaeology into conversations about climate change (Van de Noort 2011). In this poster, I analyze how archaeologists engage with questions related to climate change to determine the various ways in which archaeological research is applied to climate change. The corpus consists of abstracts from grants funded in the last 10 years by the Archaeology and Archaeometry Program at the National Science Foundation. I examine the frequency of climate change in funded abstract and then code the abstracts for key terms and phrases used to connect archaeological data to modern climate change. Main themes focus on what data methods are used, whether these topics are presented as part of intellectual merit or broader impacts, and the framing in which these topics are discussed (e.g., adaptation, vulnerability, resilience). Patterns within these abstracts determine

regional or sub-field-specific connections about how climate change is addressed. This research provides an initial exploration of how archaeologists engage with questions about climate change, which can be further expanded to include other funding agencies and interdisciplinary-focused programs.

Kirgis, Pauline [37] see Lemaitre, Serge

Kiriati, Evangelia [113] see Ogawa, Timothée

Kirk, Scott (Auxilio Management Services employed under their contract with Fort Irwin, CA), Michael Kolb (Metropolitan State University of Denver) and William Balco (University of Wisconsin, Milwaukee)

[22]

Medieval Settlement atop Monte Bonifato: A Case Study in Function over Form

Defensive Settlement or late medieval escape for nobility? When it comes to castles and many of their associated settlements it seems the latter has been pushed in English language literature more than the former for a few decades now. In this paper, we present a case study that showcases the development of a stronghold and associated settlement atop Monte Bonifato, Western Sicily, in the context of political upheaval within the island of Sicily and the greater Mediterranean as a whole. We present data from three years of work atop Monte Bonifato, highlighting how its morphology fits more with earlier, Norman castles than the date usually ascribed to it, how the mountaintop was encircled by walls in a series of building events to make it ever more defensible, and how a spatial study of pottery types might yield more information on why the summit was used and why it was subsequently abandoned at a time when other castles and fortified settlements were being redeveloped.

Kirk, Scott [270] see Grant, Leah

Kistler, Logan [202] see Wann, Kevin

Kitajima, Greg [303] see Clark, Bonnie

Kitchel, Nathaniel (Salve Regina University) and Heather Rockwell (Salve Regina University)
[219]

Pleistocene Archaeology in the Formerly Glaciated Northeast: Why Bother?

Conducting archaeological research exploring the Pleistocene occupations of formerly glaciated northeastern North America is challenging. Obstacles include an absence of stratified sites, poor preservation of perishable materials and shallow, often disturbed, sites. Perhaps because of his experience confronting these challenges shortly after completing his PhD, Bob was skeptical of our dissertation proposals focused on this theme. To paraphrase, we were confronted with what we remember as something like “If you can do archaeology anywhere why would you want to do it there?” While initially blindsiding us both, in retrospect this simple question has profoundly shaped our research programs for the better. In only a few words Bob challenged us to think creatively about what is unique in the Northeast and how to bring this to bear on anthropological questions of continental or even global significance. Here we review the research that has grown from Bob’s challenge, how these findings relate to broader questions, and where this is propelling our future research programs, all while keeping in mind “if you can do archaeology anywhere why do it there?” We hope we now have a better answer to that question.

Kitchel, Nathaniel [283] see Alperstein, Jonathan

Kitchel, Nathaniel [335] see Celia, Claudia

Kitteringham, Lia (Colorado State University), Caroline Graham (Colorado State University), Abhishek Sathiakumar (Colorado State University) and Edward Henry (Colorado State University)

[328]

Birds, Circles, and Landscapes Enclosed with Soil: Geoarchaeology at the Eastern Edge of Pinson Mounds, Tennessee, USA

Pinson Mounds is a large Middle Woodland monument complex centrally located between two other mound centers in west Tennessee. Despite intermittent archaeological research, the Eastern Precinct of Pinson Mounds has remained understudied compared to earthen monuments situated throughout other parts of the site. Comprised of the 6.7 ha. Eastern Enclosure, a platform mound, and a possible bird effigy mound, this portion of Pinson exhibits the lowest known density of artifacts and other traditional objects of archaeological focus. Geoarchaeology provides a unique opportunity to better understand the deep history of landscape modification particular to the Eastern Precinct that other archaeological approaches have not. In this research, we explore how the landscape has been modified beyond just its visible earthworks, how its components relate spatially and temporally to one another and the rest of the site, and verify the original form of Mound 30. By integrating new radiocarbon dates, geophysical techniques like magnetometry and earthen conductivity, and bulk soil analyses such as particle size analysis, magnetic susceptibility, sequential loss-on-ignition, and micromorphology, we look to answer these questions to gain insight into the complex history of interaction between Indigenous societies and the landscapes they shape.

Kitteringham, Lia [232] see Graham, Caroline

Kitterman, Anya [326] see Duke, Daron

Kiyasbek, Galymzhan [23] see Tashmanbetova, Zhuldyz

Klarich, Elizabeth (Smith College)

[208]

Discussant

Klaus, Haagen (George Mason University), Edgar Bracamonte (Museo Tumbas Reales de Sipán), Ignacio Alva (Ministerio de Cultura) and Izumi Shimada (Southern Illinois University)

[212]

Sacrifice as Politics, Killing as Identity: Regional Synthesis and New Evidence of Late Prehispanic Human Sacrifice in the Lambayeque Valley Complex, Peru

Diverse new understandings involving human sacrifice on the north coast of Peru have surfaced since 1994. In the Lambayeque Valley Complex on the northern north coast of Peru, an extensive and diachronic record of human sacrifice from several sites spanning nearly 400 individuals have been documented beginning in 2002. This paper provides a current archaeological and bioarchaeological synthesis of ritual killing in Lambayeque, from Late Moche to Inka times (550–1532 CE). Special emphasis is placed on how sacrifice reveals extended political histories: how elites and non-elites both managed and manipulated power relationships, political economies, and systems of statecraft in the offerings of human lives to the supernatural. We also consider that among complex multiethnic late prehispanic cultures, victim and group identity was also key to structuring sacrificial programs. This paper includes new evidence from the sites of Pampa Grande and Santa Rosa de Pucará, illustrating for the first time regional Late Moche and intrusive Wari-associated ritual killings (550–850 CE), foreshadowing the development of large-scale sacrifice systems in the centuries to follow.

Also considered are a series of extremely puzzling Middle/Late Sicán contexts (1050–1300 CE) documented at Huaca Lercanlech which illustrate various challenges in the study of ancient sacrifice.

Klehm, Carla (University of Arkansas) and Stefania Merlo (University of Cambridge)
[254]

Digital Storytelling on African Urbanisms: Recommendations on Fostering Digitally Enabled Equitable Participation in Heritage Production

Fostering digitally enabled equitable participation in heritage production is a major component of democratizing heritage creation. While substantial progress has been made in ensuring that digital data and infrastructure complies with the principles of FAIR (findability, accessibility, interoperability, and reusability) and LOUD (linked open usable data), less progress is discernible where basic technological knowledge and accessibility are limited. The challenge is heightened when dealing with low-resourced environments, as is common in the Global South, and the associated logistical challenges including varying technical competencies, computer and internet speeds, and cultural understandings and language barriers. This paper presents the outcomes of the NEH/AHRC “Digital Storytelling on African Urbanisms: A Model to Empower Education Initiatives Across the Global South” project (<https://www.metsemegologolo.org.za/wordpress/digital-storytelling/>). “Digital Storytelling on African Urbanisms” focused on how to best empower secondary school and university educators in the Global South to explore cultural heritage about precolonial African urbanism through digital storytelling with spatial and nonspatial data. We will discuss especially the project’s recommendations about how marginalized voices and perspectives can be integrated into the digital storytelling process through self-directed, generative storytelling curations in museum and classroom settings.

Klein, Joanna [140] see Donop, Mark

Klein, Sabine [121] see Rose, Thomas

Klemm, Maggie (University of Nebraska, Lincoln) and William Belcher (University of Nebraska, Lincoln)
[148]

The Osteobiography of Human Remains from the Seaview and Indian Town Trail Archaeological Sites

Climate change and privatization activities related to disaster capitalism threaten land ownership rights and landscape preservation in Barbuda. Barbuda is home to multigenerational residences, businesses, schools, and buildings of cultural significance. Also, on this land are dozens of archaeological sites, each representing intangible cultural significance and containing invaluable artifacts and human remains from early inhabitants of the island. Extensive site surveys and excavations have been conducted over the past five decades, each adding crucial insight about the archaeological sites and early residents of the island. The research presented here is an analysis of the human remains previously excavated from the archaeological sites of Seaview and Indian Town Trail, located on the eastern part of the island. These osteobiographical analyses include an inventory of the skeletal remains, determination of the minimum number of individuals (MNI), estimates of the biological profile, and observations of skeletal trauma and paleopathologies. Radiocarbon dating of selected samples will be utilized to determine the age of the skeletal remains and better understand site occupation in Barbuda. This research will be a comprehensive documentation of analyses conducted on the skeletal remains that were previously excavated from the sites of Seaview and Indian Town Trail.

Kliejunas, Mary [282] see Malone, Alex

Klokler, Daniela (Universidade Federal de Minas Gerais [UFMG])**[259]***Sharks and Rays and Sambaquieiros: A View from Piaçaguera*

Precolonial groups used various types of raw materials for manufacture of tools and adornments: rocks, clay, fibers, bones, and shells, among others. In general, lithic and ceramic assemblages gain more focus from researchers due to their ubiquity and better preservation. Shell mound sites, however, provide a context in which faunal remains are the main components of the matrix so the study of the social and symbolic meanings of faunal remains allows a special glimpse on the understanding of human societies' relationships with the animal world and with aquatic animals in particular. In this paper, I present findings about the shark and ray assemblages from Piaçaguera site, a shell midden (sambaqui) from Eastern Brazil. Bone points (gorges) and modified teeth (from sharks) are the most dominant types of artifacts at this site, and the majority of pieces are associated with burials. The results present a starting point for an examination of the relationship between these animals and coastal societies in the past.

Kmiec, Theodore (Texas State University)**[309]***Setting the Axis of the World: Investigations of World Tree Raising Ceremonies throughout the Chronology of Mesoamerica*

The ideological concept of the World Tree can be found in ancient and living cultures throughout the world. Many cultures located in Mexico and Mesoamerica have incorporated this tradition in their ancient indigenous art, ceremonies, and recorded oral histories. The ideology of a culture may evolve or transform due to internal and external factors over time; however, sacred principles can be hidden in plain sight or be kept secret by those who protect these ancient practices. Importantly, the concept of the World Tree is found in the iconography of Olmec material objects and monuments. Several peculiar stone cylinders were found at the three main Olmec sites of San Lorenzo, La Venta, and Tres Zapotes. This paper focuses on La Venta Monument 14, located within Mound A-3 in Complex A, at the Olmec site of La Venta. In this paper, I will explore tree or pole-raising ceremonies throughout the chronology of Mexico and Mesoamerica. Lastly, I will discuss the similarities and differences of these ceremonies found in Mesoamerica, and argue that a similar ceremony took place at Mound A-3 in La Venta Complex A.

Knab, Timothy (Universidad de las Américas Puebla)**[302]***Mesoamerican Transitions: Social, Psychological, and Symbolic*

We use metaphors for the human mind just as we do for religious, mythic and symbolic systems. These metaphoric systems reproduce the same social phenomena in ritual process and social organization. It should thus be clear that we find reintegration of social, symbolic, and metaphoric systems as a society is transformed and that they should be reflected in a coherent manner. These cultural projections reflect universal norms found not only in the work of Jung, Freud, Campbell, and Frazer but the rise of Rabbinic Judaism, Tantric Buddhism, and the Vedic Scriptures. In Mesoamerica we have failed to account for such transitions which clearly indicate major social, behavioral, and symbolic transformations. This is the case with the vibrant polycultural symbolism of late Mesoamerican narrative ceramics that reveal a remarkable world of psychical complexity and sophistication. I will examine the social, ideological, and symbolic transitions that take place in early antiquity and what they imply for Mesoamerican social and political structures.

Knapp, Gregory [220] see Pratt, Will

Knappett, Carl (University of Toronto)**[56]***Beyond the Knossian State: Urban Economy and Society at the East Cretan Site of Palaikastro*

In scholarship on the Bronze Age Aegean, there is a robust conjunction of palace, town, and state. If we take the case of Knossos, then the presumed central authority represented by its palatial complex, and its surrounding town covering 100 ha, are generally thought to imply an associated territory under its control. The same is usually assumed for the other major palatial centers that emerge on the island of Crete ca. 2000 BCE, namely Phaistos and Malia. However, Crete has other urban agglomerations that do not conform quite so neatly. The town of Palaikastro, for example, has neither any sign of a palatial building, nor any indication of a territory that one might consider a state. Where previously scholars have assumed a high degree of institutional alignment from settlement to settlement within this island society, it is increasingly apparent that some sites may have taken quite different routes in their collective action. Here I explore the coastal urban settlement of Palaikastro as a possible instance of such divergence, examining the ways in which its local economy might have contributed to its distinctive sociopolitical status.

Knecht, Rick [150] see Church, Lynn

Knell, Edward (California State University, Fullerton), Erik Otárola-Castillo (Purdue University) and Matthew Hill (University of Iowa)

[35]

Distinct Types? A Geometric Morphometric Analysis of Paleoindian Age Mojave Desert Lake Mohave and Silver Lake Projectile Points

Prior univariate and multivariate morphometric analysis of Paleoindian age Lake Mohave and Silver Lake projectile points from the Mojave Desert, California, revealed these types are distinguishable 80% of the time. Building on the prior study, we use landmark-based geometric morphometric (LGM) analyses and complementary non-LGM variables to assess whether Lake Mohave and Silver Lake points are stylistically distinct or if repeated breakage and resharpening led to convergence (overlapping morphologies) between the types. Efforts to preserve stylistic separation are evident if the point types were resharpened in an isometric manner to maintain the original shape-size relationship through the reduction process and if the blade and stem modules strongly covary and are highly integrated. Conversely, an allometric point shape-size relationship coupled with a lack of covariation between the blade and stem modules (little integration between the modules) may indicate repeated resharpening resulted in the convergence of types rather than the maintenance of distinct styles. A continuum between these patterns is possible whereby the types are separate but, in many individual cases, converge due to extensive resharpening and reworking. We tested these propositions using a database of more than 200 Lake Mohave and Silver Lake points from sites across the Mojave Desert.

Knisley, Matthew (Washington University, St. Louis) and Laure Dussubieux (Field Museum of Natural History)

[86]

New Perspectives on Precolonial Trade in Eastern Africa

Discrepancies are emerging between historical and archaeological perspectives on the nature, scale, and chronology of precolonial and caravan exchange networks in the eastern African interior. For example, the caravan trade is thought to have emerged as coastal interests expanded inland around 1800, yet multiple archaeological sites contain evidence of exchange predating the nineteenth century. This paper presents elemental analyses of obsidian and glass beads recovered from the contemporary Sandawe homeland of north-central Tanzania. The Sandawe have been characterized as descendants of a forager population that remained isolated until recent centuries. Obsidian originating in central Kenya may have entered the study area as early as 750 BC. This represents a 30% increase in the distance over which obsidian is observed to have been transported in eastern Africa, and it is the second farthest known transport of obsidian on the continent, following ancient Egypt. Glass beads from diverse sources in Asia and Europe may have arrived by the late 1600s, continuing into the present. When considered alongside other forms of material culture, these studies demonstrate that the region's inhabitants have had time-deep connections to numerous exchange networks, ranging from the Rift Valley to the Indian Ocean World and beyond.

Knodell, Alex (Carleton College)**[26]***Discussant***[26]***Chair***Knodell, Alex (Carleton College)****[26]***The Materiality of Surveillance: Scale, Complexity, and Polity*

Textual and archaeological evidence make clear that most ancient polities were concerned with surveillance in some way. However, the scale of material investment in surveillance suggests different motivations in different contexts. This paper compares the material signatures of surveillance in Greek Bronze Age polities, Iron Age city-states, and Roman imperial territories, in order to elucidate different scales of and interests in surveillance. For example, inter-polity surveillance depends on human-derived information gathering; bureaucratic systems record information about land and subjects; monuments and fortifications demonstrate the capacity to observe just as much as they function to collect actual information. In the Greek world, these material interventions seem to be significant first in zones such as borderlands, where immediate territorial claims are at stake, along key land routes, and in productive hinterlands to monitor subjects or slaves. In Roman times such interventions are deployed as explicit, material extensions of imperial authority, especially in recently annexed cities and landscapes. A long-term view of surveillance in contexts from Mainland Greece, the Cyclades, and Jordan suggests that the spatial scale and organizational complexity of ancient polities are closely linked not only to their capacity to surveil, but to showing that they are doing it.

Knodell, Alex [191] see Manquen, Brody

Knudson, Kelly [288] see Biver, Matthew

Knudson, Kelly [241] see Stamer, Julianne

Ko, Jada (Brown University, Institute at Brown for Environment and Society)**[19]***Reevaluating the Concept of Sustainability in the Context of Animal Resource Utilization in Ancient China*

The extraction and utilization of natural resources often come with an underlying question of sustainability. At present, there are constant debates on and readjustments to how sustainability is measured. One of the biggest challenges is to establish suitable baselines to evaluate the balance between resource economies, resource availability, and ecological homeostasis. Archaeology provides not only deep-time data to push ecological baselines back chronologically, but also long-term perspectives on how humans have impacted and have been impacted by changes in natural resource distribution, abundance, and characteristics in the midst of sociocultural, ecological, and climatic fluctuations. This paper explores from a zooarchaeological perspective on how the relationships between human societies and animal resources in ancient China can allow us to examine practices that impact resource sustainability. The discussion focuses on animal husbandry and wildlife exploitation in Neolithic to Early Bronze Age societies in different ecological zones, and on the long-term ecological footprints these practices left at local and regional scales. While sustainability is a relative concept dependent on space, time, sociocultural, economic, and political needs, histories, regenerative characteristics of resources and various other factors, the practices that affect sustainability are accumulative and relevant to the discussion of biodiversity losses we experience today.

Koenig, Charles (Sul Ross State University)**[294]***Earth Oven Experiments in Texas and Wyoming*

The durable remains of earth oven construction—namely, fire-cracked rock (FCR)—lack the same tactile

connection to the past as lithic or ceramic artifacts. However, constructing experimental earth ovens provides an immersive experience where students, researchers, and the general public can gain a better understanding of FCR, earth ovens, and Indigenous cooking strategies more broadly. Providing this experiential window into earth ovens is critically important for archaeology because (1) Indigenous groups across the world continue to use earth ovens, and (2) FCR are frequently encountered in academic and contract archaeological projects. This paper summarizes my experiences using oven experiments as part of research, field schools, and public outreach projects in Texas and Wyoming. Due to the effort required to construct an earth oven, most oven experiments fall somewhere along the continuum from replicative public displays with limited or no quantitative data collection to meticulous recording of every input variable. However, even in instances where features are constructed for public engagement, researchers are still able to collect meaningful information from oven experiments—especially when working with descendant communities.

Koenig, Charles [332] see Castañeda, Amanda

Koenig, Viola (Ethnologisches Museum)

[302]

Not Afraid of Conflict: The Feisty Rulers, Communities, and Scholars of Ancient Southern Mesoamerica—Retrospective of a Lived Tradition of Rivalry

Can we compare the power, decline, and survival of Mesoamerican sociopolitical and religious systems with contemporary academic schools? Are there characteristic relationships between researchers and research subjects? Does this apply at least to the Mixteca-Puebla and Oaxaca regions? In other words, what do the Danzantes, Quetzalcoatl, and Eight Deers share with the Diego Durans, Alfonso Casos, John Pohls, and his contemporaries? This somewhat adventurous thesis is the introduction to John Pohl's field of operation. How does it differ from the better-known studies on Mesoamerica such as that of the Maya and Aztec? How did academic schools come to be? Is the criticism justified that important results for the overall Mesoamerican picture are being ignored outside the regional focus? Are we content with small-scale slice-and-dice research? Given the long history of studying Mixtec pictorial manuscripts, how should we deal with the fact that this graphic communication system is rarely mentioned in the general literature? What about the powerful interpretive sovereignties, even misleading attributions, that influence not only international research, but lull the communities concerned into false certainties? A critical balance sheet and a cautionary outlook.

Kohanski, Neil

[221]

Unearthing Maya Rituals: The Power of Ethnographic Analogy

This paper seeks to explore the pivotal role of ethnographic analogy in archaeological research, with a focus on the Maya ritual within subterranean spaces. While ethnographic analogy remains indispensable to the archaeological enterprise, it has faced significant resistance within the archaeological community. This presentation aims to illuminate the importance of ethnographic analogy, especially in the context of the archaeology of religion, a field marginalized since the 1960s with the rise of Processual Archaeology. The marginalization has led to the misapplication of Western models to non-Western societies, highlighting the need for reevaluation and the integration of ethnographic methods. This paper reviews the extent to which ethnographic models have been employed in the archaeological investigations and interpretations of caves. I examine where these analogies have been successfully applied and suggest ways to further integrate ethnographic analogy into archaeology. I aim to promote a deeper appreciation for ethnographic analogy within the archaeological community, emphasizing its critical role in understanding the archaeology of religion and beyond. Through collaboration and interdisciplinary approaches, we can enhance the rigor and cultural sensitivity of archaeological research elevating the knowledge of indigenous communities.

Kohatsu, Thomas [3] see Okumura, Mercedes

Kohler, Timothy [308] see Bird, Darcy

Kohut, Lauren (Winthrop University), Ryan Smith (University of Pittsburgh), Romuald Housse (University of Paris I Panthéon-Sorbonne), Elizabeth Arkush (University of Pittsburgh) and Steven Wernke (Vanderbilt University)

[323]

From Pukaras to Polities: Exploring Late Prehispanic Andean Hillforts through Large-Scale Network Analysis

This paper employs network analysis to explore the sociopolitical dynamics of the late prehispanic south-central Andes through the lens of 1,400 hilltop fortifications. Hilltop fortifications in the Andean highlands, known as pukaras, are emblematic of the Late Intermediate period (1000–1450 CE) and Late Horizon (1450–1532 CE). Focusing on defensive networks reveals patterns of interdependence that provide insights into the larger framework of sociopolitical organization during the late prehispanic era. Our study investigates relationships among these hillforts by combining spatial analysis and formal network analysis. Edges between hillforts were constructed and weighted based on intervisibility and walking cost to account for the influence of the mountainous Andean landscape on interactions and mutual aid. We identify significant sociopolitical units within this regional dataset using community detection measures, validated against archaeological and ethnohistoric sources. Analysis of the resulting networks reveals important regional diversity in community structure, highlighting interactions between local landscapes, levels of conflict, and sociopolitical organization. This paper highlights the potential of interregional scale network analysis to uncover patterns in large archaeological datasets and advances our understanding of how defensive networks shaped late prehispanic Andean polities.

Kolar, Miriam (School for Advanced Research)

[27]

Archaeoacoustics at Chavín de Huántar: New Evidence for Social Complexity via Sonic Communication Technologies

A dynamic, pervasive link between materiality and humans, sound remains an underestimated and deeply misunderstood domain for archaeological study. Archaeoacoustics fieldwork with broad community contributions at Chavín de Huántar since 2008 has enabled the development of new archaeological research methodologies to reveal, define, and explain communication affordances of site materials, structures, and settings. Sustained explorations of "what studying sound in archaeology could be" in fieldwork leveraged acoustics and auditory science to understand site infrastructural features in both archaeometric and experiential terms. Site-responsive acoustical measurement techniques and novel performance experiments with site-excavated *Strombus* marine shell horns resulted in unprecedented documentation of archaeological soundmakers and ground-truthing of their use-potential in site settings. Systematic auditory localization experiments further elucidated perceptual implications of Chavín's interior architectural design. Through identifying and exploring diverse evidence for human-environmental interactions at Chavín, site archaeoacoustics research has demonstrated key material-anthropological connections that challenge some long-held interpretations about social roles and spatial functionalities, while exemplifying innovations that mark Chavín as a nexus of social complexity in the Andean Formative period. Nuanced archaeoacoustical analyses, considered with respect to site and regional contexts, constitute a novel "archaeological possibility space" (Kolar 2020) that models a new way of conducting and interpreting multisensory archaeology.

Kolar, Miriam (School for Advanced Research)

[322]

Discussant

Kolb, Charles (National Endowment for the Humanities [retired])

[255]

Chair

Kolb, Michael [22] see Kirk, Scott
 Kolb, Michael [328] see Rankin, Caitlin

Kolbenstetter, Marie (Leiden University; Université Paris Nanterre)
[118]
Chair

Kolbenstetter, Marie (Leiden University; Université Paris Nanterre)
[296]

The Piedras Rayadas of El Tigre, Honduras: Brokering Place and Cultural Memory

Grooved boulders seem to be an archaeological feature unique to El Tigre island in Honduras. Distributed around the small island, they are known locally as *pedras rayadas*, and feature in local oral histories. As durable traces, their meaning is everchanging, yet intimately bound to the locality of the island. In the most eastern point of the site of La Tigüilotada, 16 *pedras rayadas* line a promontory on the edge of a cliff, along with petroglyphs. Material and malacological evidence suggest the use of this promontory in communal feasting. While the material associated with feasting seems to date to the earlier phase of occupation of La Tigüilotada (800–1200 CE), the *pedras rayadas* seem to date to the last occupation of El Tigre prior to colonization (1300–1600 CE). As such, the meaning of this place seem to have persisted through time, and through different sets of cultural values. In this setting, we propose to examine the monumentality of the *pedras rayadas*, both as place-making devices and activators of cultural memory. Through this case study, we aim to engage with the concept of monumentality (1) in terms of (re)production of meaning and (2) as brokering past, present and future.

Kolbenstetter, Marie [118] see Ruf, Kim Eileen

Kollias, G. Van (Brandeis University)
[230]

El Jovero: Investigating Political Frontiers on the Usumacinta River

The borders and frontiers of ancient communities provide a rich opportunity to examine the effects of social and political change. These interstitial spaces are often conceptualized as part of a polity body but may be better understood as spaces of continual change and reorganization, positioning these communities as active rather than passive elements in regional political dynamics. I deploy this perspective to examine polities in the Maya lowlands, where an array of competing political structures vied for control over the landscape. Investigating the interstices of Lacanja Tzeltal, Piedras Negras, and Yaxchilan along the Usumacinta River provides a unique opportunity to contrast the effects of political machinations among ancient Maya royal courts on the countryside, borders, and frontiers of their territories. Presented here are analysis and interpretation of two seasons of fieldwork, supported by lidar-based GIS analysis, focused on the archaeological site of El Jovero, Chiapas Mexico. This research aims to better understand how the ebb and flow of control projecting from major regional centers affects communities in their interstices. I examine the occupational trajectory of El Jovero as a community inhabiting a landscape affected by power struggles and conflict between ancient Maya royal courts.

Kollmann, Dana and John Nase (DDS, DMORT)
[228]

Therapeutic Dentistry in Prehistoric Maryland: New Analyses from the Late Woodland Period Hughes (18MO1) Archaeological Site

Late Woodland period human remains were recovered from the Hughes site (18MO1) in the Maryland Piedmont during the 1930s. Among the remains are two mandibles and a maxillary right dental quadrant that contain carious teeth suspected of having undergone antemortem dental modification. Affected teeth representing two adult females and a child were analyzed utilizing radiography, scanning electron microscopy,

and visible alternate light source macro-photography. These teeth show signs of both radial and concentric tool marks in both the enamel and dentin borders of carious lesions. It is proposed that these modifications provide evidence of the practice of therapeutic dentistry during the Late Woodland period in the Middle Atlantic region. This presentation includes photographs of maxillae, mandibles, and affected dentition representing individuals unaffiliated with known Native American regional populations. In good faith, an amended version of this paper was submitted to the Maryland Commission on Indian Affairs for comment, as these findings contribute to extant, albeit infrequent, documentation of dental pathological intervention in the Middle Atlantic, Late Woodland period. Nonacademic venues for dissemination of findings include bioanthropology students and archaeological interest groups.

Kolpan, Katharine (University of Idaho)

[113]

Evidence of Maritime Trade at the Bulgarian Black Sea Site of Apollonia Pontica (Seventh–Third Centuries BC)

This presentation will highlight the evidence for trade networks and the distribution of goods at the ancient port city of Apollonia Pontica along Bulgaria's Black Sea Coast. Founded in the seventh century BC by Milesians from western Ionia fleeing an incursion by their Lydian neighbors, Apollonia—with its two excellent ports and easy access to the Bosphorus—quickly developed into a major economic and trade center distributing goods from the Aegean, the Black Sea, and the Near East. It appears that Apollonia's proximity to the copper ore deposits of the Medni Rid mountains and its abundant local fisheries aided its expansion. This presentation will discuss how the presence of certain pottery types, such as South Ionian Archaic Ib–c Wild Goat Style, Attic black-figure, and imported wine amphorae indicate exchange relationships with areas such as Attica, western Ionia, Rhodes, and Chios. The presentation will also explore the evidence for certain types of imported glass, as well as specific kinds of exotic fruits and nuts such as pistachios, dates, olives and pine nuts, to understand what kind of information they can provide about trade relationships between Apollonia and the Aegean, Ionian, and Black Sea regions.

Kong, Shu [288] see Feng, Jennifer

Kooiman, Susan (Southern Illinois University, Edwardsville) and Kathryn Frederick (University of Olivet)

[183]

Collecting, Caching, and Cooking: The Agency of Women in Hunting-Gathering Societies

Decades of ethnographic and archaeological research has shown that women manage and perform many activities associated with food preparation and the manufacture of food processing implements in hunting-gathering societies around the world. This paper argues that dramatic shifts in Terminal Late Woodland (AD 1000–1600) subsistence strategies in the Northern Great Lakes region of North America were driven by the decision-making of women. Analysis of subterranean food storage containers (their construction and location), ceramic cookware (its construction and use), and evidence of associated foodstuffs supports the argument for a shift in focus to select abundant fall resources that could be collected in surplus, with minimal labor costs. The tasks of food collection, processing, and cooking, along with the manufacture of associated technologies, are traditionally accomplished by women, leading to the conclusion that these primary markers of subsistence change were controlled by women. The traditional division of labor, evidenced in ethnographic and ethnohistoric accounts, places women as agents of socioeconomic change.

Koonce, Jacob (Archaeometry Laboratory, MURR), Candace Sall (Museum of Anthropology, University of Missouri) and Brandi MacDonald (Archaeometry Laboratory, MURR)

[42]

Sourcing Obsidian in the Central Mesoamerican Region Using XRF Analysis

Obsidian tools and flakes are commonly examined in sourcing studies in areas with abundant volcanogenic

deposits. Obsidian provenance research in the central Mesoamerican region has shown extensive networks of obsidian trade during the Formative and Classic periods. In this study, we used portable XRF to analyze a previously unstudied collection of over 200 artifacts housed at the Museum of Anthropology (University of Missouri) from sites in the Basin of Mexico, Belize, and Guatemala including Tula, Teotihuacan, Uxatlan, Cotzumalguapa, and others. The resulting data from the artifact analysis were then compared to the obsidian source reference database at the Archaeometry Lab at the University of Missouri Research Reactor. The results show patterns of long-distance exchange of obsidian that are useful for understanding patterns of trade relationships.

Koons, Michele (Denver Museum of Nature & Science)

[13]

Chair

Koons, Michele (Denver Museum of Nature & Science), Jose Ochatoma Cabrera (Paisajes Arqueológicos de Pañamarca), Amy Gillaspie (Denver Museum of Nature & Science), Alex Clavo Cruz (Paisajes Arqueológicos de Pañamarca) and Jessica Ortiz Zevallos (Paisajes Arqueológicos de Pañamarca)

[13]

The Hall of the Braided Serpents (La Sala de las Serpientes Trenzadas): New Discoveries on Pañamarca's Moche Plaza

Excavations in 2023 revealed a previously unexcavated structure in the southern corner of the Moche plaza at Pañamarca. Here we present our findings related to this building, which contains large, well-preserved pillars with anthropomorphized snakes on all facades and the life-sized painting of a Moche monster chasing a man. We also discuss multiple renewal events of the space that included various offerings—most notably textiles—burning events, the careful capping of floors, and the whitewashing of previously painted walls. The prominent position of this structure, perched above the plaza but also private, leads us to suggest it played an important role for privileged individuals overseeing the activities performed below.

Koons, Michele [111] see Baxter, Erin

Koons, Michele [88] see Huntley, Deborah

Koons, Michele [13] see Ikehara Tsukayama, Hugo

Koons, Michele [13] see Ortiz Zevallos, Jessica

Koons, Michele [13] see Trever, Lisa

Koontz, Rex (University of Houston)

[128]

The Place of Maguey at El Tajín and in North-Central Veracruz during the Classic Period

The presence of maguey in key iconographic programs at the major Classic Veracruz site of El Tajín has been explained largely through a hypothetical pulque cult at the site. This presentation will both extend and debate this interpretation of maguey iconography by exploring the locative nature of the maguey motif in a regional context.

Koontz, Rex (University of Houston)

[216]

Discussant

Kornfeld, Marcel [197] see Lynch, Elizabeth

Kortscheff, Jessie [102] see Kroot, Matthew

Kortscheff, Jessie [102] see Ptacek, Alexandra

Kortum, Richard and William Fitzhugh (Smithsonian Institution)

[23]

Rock Art and Archaeology in the Mongolian Altai, Part 2

The ongoing Khoton Lake project documents several hundred archaeological sites and environmental conditions spanning the past 8,000 years. Forty excavated sites ranging from pre-Neolithic to the Bronze, Iron, Turkic, and medieval periods occur as dwellings, ritual, mortuary, ceremonial, and special-purpose places. In many cases, geophysical orientations, intentional landscape settings, and proximity to rock art panels or clusters are apparent. More than 12,000 individual petroglyphs have been recorded. Direct association of rock art and archaeology is found most conspicuously in Late Bronze Age khirigsuur mounds that include engraved deer stones and Mongolian deer imagery executed on nearby bedrock. Proximity indicates a close relationship between practical lifeways, ritual, and belief rarely found in archaeological settings. Experimental scientific dating shows promise for linking rock art to archaeological cultures. Graphic representations that begin in the Upper Paleolithic and explode during the Bronze Age and later periods yield information that cannot be retrieved from archaeological contexts alone. Combined, these data demonstrate human relationships, behavior, technologies, values, and beliefs in ways that enrich our understanding of Central Asian cultures and their developmental trajectories, traditions, and ecologies.

Kortum, Richard [23] see Fitzhugh, William

Kosakowsky, Laura [251] see Robertson, Robin

Koski-Karell, Daniel [127] see Sabo, Allison

Kosyk, Katrina (McGill University)

[322]

Moderator

[322]

Discussant

Kotegawa, Hirokazu (Universidad Nacional Autónoma de Honduras)

[309]

Punto de referencia en la movilización de los olmecas de la costa del Golfo de México

Dentro y fuera de Mesoamérica, se encuentran varios objetos portátiles con la iconografía olmeca. Pero ¿este fenómeno está mostrando la movilidad de los olmecas? Es difícil de responder esta pregunta porque los objetos pequeños se pueden trasladar de distintas maneras. Sin embargo, también hay otros objetos no portátiles con la iconografía olmeca para comprender la movilidad de los olmecas, como petrograbados representados en las rocas gigantes. Aunque algunos de ellos no muestran el auténtico estilo iconográfico olmeca, pero también existen algunos petrograbados con el estilo auténtico. En este estudio nos enfocaremos a la distribución geográfica de estos petrograbados fuera de zona nuclear olmeca, comenzando con la identificación de petrograbados con el auténtico estilo olmeca, ya que para elaborar este tipo de objeto con autenticidad se necesita una comprensión profunda de significados iconográficos. Anteriormente, el petrograbado olmeca encontrado más al sureste de Mesoamérica se encontraba en Chalchuapa, El Salvador. Pero recientemente hubo un hallazgo de un nuevo petrograbado olmeca en el sitio arqueológico Los Naranjos, Honduras. La aparición de este petrograbado nos muestra una posible dimensión máxima y ruta de la movilidad de los olmecas, ya que podemos considerarlos como puntos de referencia de su llegada.

Koutrafour, Vasiliki (University of Edinburgh), Scott Van Keuren (University of Vermont) and Jonah Steinberg (University of South Carolina)**[6]***Early Romani Archaeologies*

Roma people, whose ancestors and language come from India, form a major community in all countries of Europe and are often referred to as “Europe’s largest minority.” Greece is distinctly central in Romani history, as Greek profoundly impacted the Romani language, and it was in the thirteenth and fourteenth centuries that settlements in the Peloponnese, Crete, and Corfu are first identified in historical records. The traces of these communities—the Romani archaeological past—have been entirely ignored by modern scholars. In this paper, we introduce the Early Romani Archaeologies Project, envisioned as an “archaeological ethnography” that reconnects this past to the lives of contemporary Roma in the region. We report preliminary results of fieldwork, but more importantly, explore questions about how such a long-term project should be conceived and who it might involve and ultimately serve.

Kovacevich, Brigitte (University of Central Florida)**[122]***Chair***Kovacevich, Brigitte (University of Central Florida), Michael Callaghan (University of Central Florida), Karla Cardona (University of Central Florida) and Rodrigo Guzman (University of Central Florida)****[122]***An Introduction to Archaeology at Holtun, Guatemala*

The archaeological site of Holtun, Guatemala, has been documented as an intermediate-sized Maya center with occupation spanning the Middle Preclassic through Terminal Classic periods. The site is situated approximately 35 km southwest of Tikal and 12.3 km to the south of Yaxha. The formal site consists of a monumental epicenter built atop a karstic hill positioned along a northeast-southwest axis. According to the most recent mapping at the site, the epicenter consists of 14 groups and 86 structures, all showing evidence of stone construction with a significant outlying, rural population. Major monumental architecture consists of a Middle Preclassic E-Group, Late Preclassic Triadic Group, ballcourt, stone-enclosed causeway, and various elite residential groups of stone architecture. This paper will introduce the session and give background on investigations at the site including the Holtun Archaeological Project (HAP) which began in 2010, as well as investigations that preceded it. We will detail the major findings of HAP, especially those that have been previously published. These include methods for preservation and recording of monumental art and ceramic analysis. Findings that are not able to be presented in the session will also be discussed, including bioarchaeological data and possibilities for future investigations.

Kovacevich, Brigitte [122] see Batres, Kimberly

Kovacevich, Brigitte [122] see Callaghan, Michael

Kovacevich, Brigitte [122] see Crawford, Dawn

Kovacevich, Brigitte [122] see Figueroa, Alejandro

Kowalewski, Stephen (University of Georgia)**[301]***The Institutional Basis of Sustained Farming Systems*

For key agricultural resources, people form and refine social institutions of property tailored to biophysical constraints and affordances of the local environment. As known from indigenous texts and practices, and a large body of historical research, in Oaxaca—and by extension Mesoamerica and beyond—intensive terracing, irrigation, and rainfall-dependent farming, etc. are associated with different institutions of property and resource management, and varying patterns of labor and social inequality. The agroecosystems, and associated institutions, knowledge, and cultural practices forming the social means of production have

archaeological correlates that can often be traced back in time for several thousand years. Here, property regimes do not form an evolutionary sequence, they do not necessarily become more exploitive over time, nor are they responses to population pressure. In fact, the most land- and labor-intensive farming systems can make for relatively low wealth inequality and democratic local governance. Property regimes are created and maintained because they work in specific contexts, they provide for sustained use of resources.

Kowalewski, Stephen [218] see Parbus, Brett

Koyiyumptewa, Stewart [269] see Solometo, Julie

Kozuch, Laura (University of Illinois)
[259]
Chair

Kozuch, Laura (University of Illinois)
[259]

Extant Shark Tooth Artifacts at Cahokia

Cahokia is one of the most important archaeological sites in North America and was populated from AD 1000 to 1300. It was mound-building center with exotic lithics, ceramics, marine shell beads, and shark teeth. Here, I present information on 21 Greater Cahokia extant shark teeth along with contextual and chronological information. None of the teeth are fossils but rather are from freshly caught animals, and as such they are considered trade goods. More than one-third of the teeth were drilled in the middle of the root indicating that they were hafted for pendants or for tools/weapons. Shark teeth are rare from Mississippian sites, making shark teeth at Greater Cahokia especially unique. I show that the teeth and/or jaws were extracted from extant, freshly caught sharks and probably acquired from the Gulf of Mexico or south Florida. Shark teeth were found in high-status contexts, and shark tooth replicas were made from chert. The intentional importation of shark teeth is another indication of the seminal nature and far-reaching trading relationships of Cahokian culture.

Kraan, Claudia [135] see Conlan, Christine

Kraan, Claudia [60] see Giovas, Christina

Kracht, Emily and Lindsay Bloch (Tempered Archaeological Services)
[135]

Shake, Rattle, and Roll: Continuity of Rattling Ceramic Vessels and Adornos in the Caribbean

Ceramic rattles and rattle vessel adornos have received little attention in current Caribbean archaeology literature. These rattles may be overlooked or misidentified in Caribbean ceramic collections due to their minimal audibility or “failure” during the construction process due to their technical complexity. Here, we evaluate existing reports of rattle ceramics and adornos in the Caribbean as well as report on the discovery of five rattle adornos within collections at the Florida Museum of Natural History. A detailed review of adorno rattles, including microscopic analysis, measurement of sound intensity, and a replication experiment is conducted. This study answers questions regarding their technological construction, potential function, geospatial and temporal spread, and cultural implications to Indigenous groups in the Caribbean. Despite difficulty in their construction, adorno rattles and ceramic rattles appeared in the Greater and Lesser Antilles throughout the Ceramic Age and likely functioned in ceremonial spaces. The importance of rattles to Indigenous groups in the Caribbean and their association with *cemísm* indicates their significance as a social valuable.

Kracht, Emily [50] see LoBiondo, Matthew

Kradin, Nikolay (Russian Academy of Sciences)**[17]***Inner Asian Nomads and World-System Analysis*

World-systems analysis was created to describe capitalism. However, in 1989, Abu-Lughod expanded the temporal boundaries. She described the world-system of the thirteenth century, and now it has become customary to talk about Mongolian globalization. After her, Gunder-Frank, Chase-Dunn, Hall, and Wilkinson showed that world-systems analysis is applicable to preindustrial states, archaic, and primitive societies. In Afro-Eurasia, the nomads have performed important intermediary functions between regional world-systems cores (civilizations). They occupied a place of semi-periphery and have provided the connection of the flows of goods, finances, and technological and cultural information. The imperial and “quasi-imperial” organization of the nomads in Inner Asia developed after the ending of the “axial age” at the time of the creation of the Ch’in empire in China. In comparative perspectives, it was in regions first, where there were available large spaces favorable to nomadic pastoralism (regions off the Black Sea, Volga steppes, Mongolia, etc.) and, secondly, where the nomads were forced into long and active contact with more highly organized agricultural urban societies (Scythians and Western Asian ancient states, Hunns and Roman—Byzantium Empires, nomads of Inner Asia and China from Xiongnu to medieval and premodern Mongols etc.).

Kratimenos, Panos**[59]***Anachronology in the Study of the Precolumbian Maya: Toward a Post-Postclassic*

All Mayanists, and Mesoamericanists in general, are familiar with tripartite chronologies. The periodization of time in precolumbian Mesoamerica between a “Preclassic”/“Formative,” “Classic,” and “Postclassic” has been baked into the conceptual framework of the discipline since its earliest days. However, in the more than a century since the terms were first used, subsequent discoveries have consistently served to undermine these demarcations, rendering them increasingly tenuous and arbitrary. Moreover, beyond the simple matter of accuracy, this traditional model is also increasingly problematic in the era of de- and neocolonialism. Focusing on the precolumbian Maya, this talk will explore the origins of the tripartite chronology, the assumptions and underpin it and that we tacitly perpetuate in our persistence with it, as well as propose an alternative interpretive model for the long-maligned “Postclassic” phase from ca. tenth century AD to the Spanish conquest.

Krause, Maya (Vanderbilt University) and Tiffany Tung (Vanderbilt University)**[246]***Childhood in the Wari World: A Bioarchaeological Investigation of Dietary Patterns in a Middle Horizon (600–1000 CE) Community*

This paper uses an anthropological bioarchaeological approach to examine stable isotope data to reconstruct juvenile diet and migration. Through the analysis of stable carbon and oxygen isotope data from dental enamel carbonates, this study builds a preliminary understanding of the process of childhood-making and enculturation of individuals from the site of Auquimarca, which was affiliated with the Wari Empire (600–1000 CE) in the prehispanic Andes. The site, located in the department of Junín, is composed of residential structures and 126 tombs. This study analyzes 339 enamel carbonate samples, which represent 80 individuals. Stable carbon and oxygen isotope data from enamel carbonates allow for a reconstruction of diet and migration from infancy to adolescence, as dental isotopic signatures offer a retrospective glance into an individual's childhood. Results show a mean of -5.39‰ (SD = 1.7) for $\delta^{13}\text{C}$ in enamel and -9.46‰ (SD = 1.0) for $\delta^{18}\text{O}$ in enamel. Preliminary results suggest that the community heavily subsisted on C4 plants, such as maize. Additionally, five individuals in the community spent their childhood, or part of their childhood, in a nonlocal region. These data are considered alongside stable isotope data from other Wari era sites and other sites in the region.

Krause, Samantha [295] see Harrison-Buck, Eleanor

Krause, Samantha [281] see Smith, Heather

Kreimer, Ben [244] see Podzimek, Faithleigh

Kress, Yakira, Stephanie Chen, Sarah Robertson and Laura Yang

[266]

Chipped Stone Production, Scavenging, and Trade in Spanish Colonial New Mexico: New Evidence from San Antonio del Embudo

Chipped stone is often found in archaeological deposits at eighteenth- and nineteenth-century settler villages of northern New Mexico, though there has been little critical assessment of settler traditions of lithic production and use. In this poster, we discuss an assemblage of over 500 chipped stone artifacts recovered from the small plaza site of San Antonio del Embudo. We examine the sources, geographical availability, tool and flake morphology, patterns of breakage, and tool-to-flake ratios to illuminate chipped stone practices during the Spanish colonial, Mexican, and early American territorial periods. We argue that the chalcedony artifacts in the assemblage were likely scavenged from a nearby thirteenth-century site, while the obsidian points were obtained through colonial era trade networks. By contrast, the rhyolite and quartzite flakes indicate that Spanish settlers were engaging in limited on-site knapping, likely learned from their Indigenous neighbors.

Kressly, Douglas (Wichita State University)

[266]

Analysis of Lithic Material from the Boxed Springs Site (41UR30)

While the Boxed Springs site is primarily known for the elaborate Early Caddo ceramic assemblage from cemetery contexts, lithic material is also abundant at the site. This study describes the lithic assemblage recovered from Wichita State University's investigations in 2021 and 2022. Given the limited time frames allotted for excavations at Boxed Springs during these periods, lithic material recovered at the site was abundant. This analysis was conducted in order to: Identify and document the raw material within the site, attempt a better understanding of the stages of production that may be present, and to identify and document any diagnostic artifacts recovered. The procurement of raw materials, especially when examined alongside stages of production present at Boxed Springs has the potential to provide information concerning possible cultural spheres and areas of interaction for the people that once lived there. Further, the presence of diagnostic lithic artifacts may assist in providing clues as to Caddo lifeways, both at Boxed Springs and within the greater Caddo region.

Krier, Jon (University of Oregon, Museum of Natural and Cultural History)

[61]

Searching for Submerged Salmon Streams

Beringia is central (both physically and theoretically) to most out-of-Asia theories for how humans first came to the Americas. Understanding the chronology of the peopling of the Americas is complicated by the fact that roughly two million km² of Beringia (an area larger than the modern US state of Alaska) was submerged over the course of the late Pleistocene and Holocene. Because of the vast areas involved, and extreme difficulty of underwater excavation, a simplified strategy for identifying key landform types could be useful for locating submerged sites. Identifying potential salmon-bearing streams using GIS analysis is proposed as a single-factor modeling strategy. Studies of the distribution of genetic diversity among modern salmon populations indicate that the fish were present in Beringia (as well as refugia along the Pacific Northwest coast). Salmon are a vital source of marine-derived nutrients and enhance the productivity of landscapes in which they spawn, in addition to serving as an attractive and reliable magnet resource for human populations. Accurate regional-level drainage models are not currently possible with available data, but smaller-scale modeling could prove fruitful.

Krigbaum, John [260] see Boileau, Arianne

Krigbaum, John [205] see Fry, Megan

Krigbaum, John [42] see George, Richard
 Krigbaum, John [201] see Magoon, Dane
 Krigbaum, John [178] see Pugliese, Francisco

Kristiansen, Kristian

[17]

Prehistoric World Systems in the Age of the Genetic Revolution: The Eurasian Evidence

The third science revolution has reintroduced migration and mobility as major drivers of change throughout later prehistory in western Eurasia. However, it has also allowed us to revisit and redefine different types of migrations and their role in the transformation of prehistoric world systems in a broad sense. Here, I exemplify this by contrasting three types of migration from the arrival of farming to the end of the Bronze Age.

Kristy, Gwendolyn

[44]

The Remains of the Transcontinental Air Mail System

The period in American history from 1924 to the 1940s represents a pivotal time for transcontinental aviation, making it possible for mail to travel from New York City to San Francisco in 30 hours. Transcontinental aviation is a feat that had not been possible prior to the establishment of a system of lighted beacons and concrete navigational arrows. The transcontinental air mail system is associated with a pioneering period in American history associated with travel and transportation that predates the invention of radar. The ability for pilots to travel from east coast to west coast in a day and a half transformed not only the way aviation was conceptualized in our country but the fundamental ways in which people communicated. The physical manifestations of this transformative shift remain on the landscape in the form of slowly deteriorating concrete arrows and beacon towers remnants. The route and beacon locations are well documented textually. Using remotely sensed data and historic maps, this poster documents the physical vestiges of this small chapter in history to understand and document what remains of the transcontinental air mail system with a particular focus on public lands.

Kroot, Matthew (Arizona State University)

[102]

Chair

Kroot, Matthew (Arizona State University), Matt Peeples (Arizona State University) and Jessie Kortscheff (Arizona State University)

[102]

The Benefits, Challenges, and Student Outcomes of an Academic-Governmental Collaboration for Local Undergraduate Field Training in Archaeology

In 2021 the City of Phoenix's Archaeology Office invited Arizona State University instructors and students to assist in the development of a management plan for a parcel of land within the S'edav Va'aki Museum and Archaeological Park lands via a field training program in archaeological site assessment. This invitation was well-timed as ASU had also been looking to develop lower cost local field training opportunities. A treatment plan and course outline were developed through periodic meetings among ASU, the City's Archaeology Office, and the Tribal Historic Preservation Offices of Gila River and Salt River Pima-Maricopa Indian Communities. The field program was designed to provide students broad training that included archaeological field and lab methods, as well as a background in tribal consultation, the cultural resource management sector, relevant legal and ethical frameworks, permitting, curation, archival research, and long-term preservation planning. This poster describes the benefits and challenges of the collaboration for student outcomes. Such a program, while certainly more administratively challenging than many alternative arrangements, provides students with a number of important protections, greater access to instruction,

additional training opportunities beyond the course, and chances for professional networking outside of academic archaeology.

Kroot, Matthew [102] see Peeples, Matt
 Kroot, Matthew [102] see Ptacek, Alexandra
 Kroot, Matthew [102] see Umbriano, Chiara

Krupa, Krystiana (University of Illinois, Urbana-Champaign) and Jayne-Leigh Thomas (Indiana University)

[8]

Reviewing the 2023 Intensive NAGPRA Summer Training & Education Program (INSTEP)

The national need for NAGPRA and repatriation education is widely recognized in the museum and tribal communities. In July 2023, the authors co-facilitated the first Intensive NAGPRA Summer Training & Education Program (INSTEP), funded by the Wenner-Gren Foundation. This presentation reviews the design, implementation, evaluations, and applicant information from the 2023 program. Its first iteration welcomed a total of 38 participants from universities, museums, federal and state agencies, and tribal nations. The workshop lasted for five days and was hosted in Bloomington, Indiana, and was led by a variety of tribal speakers. In order to improve the accessibility of this program, accepted applicants were not charged to participate—tribal citizens received scholarship funding, and all other accepted applicants participated for free as long as they could make it to the workshop location. INSTEP training topics included understanding and implementing NAGPRA; best practices for curation and consultation; decolonization in museums; inadvertent discovery under NAGPRA; and best practices for repatriation and reburial, among others. This presentation emphasizes both the project design and the efficacy of the program based on participant evaluations.

Krupa, Krystiana [300] see Carbaugh, Aimée
 Krupa, Krystiana [72] see Hargrave, Eve
 Krupa, Krystiana [100] see Newell, Savannah

Krupicz, Arthur [103] see McCarthy, Andrew

Krus, Anthony (University of South Dakota), Charles Cobb (Florida Museum of Natural History), Brad Lieb (Department of Culture and Humanities, Chickasaw Nation) and Edmond Boudreaux III (Mississippi State University)

[279]

A “Little Bang” at the Start of the Little Ice Age? Late Mississippian Mound Center Chronology in the Upper Tombigbee River Drainage

The Mississippian presence in the Upper Tombigbee River (UTR) drainage is represented by dispersed communities and single-mound centers with modest-sized occupations. The artifact sequence for the UTR closely mirrors that of the neighboring Moundville polity and the UTR traditionally has been viewed as having occupations that extended throughout the Mississippian period into the colonial era. Lubbub Creek and Butler Mound are the only Late Mississippian mound centers in the UTR that have been intensively investigated, with the latter having been subjected to excavations in 2022-2023 by Mississippi State University. We present a robust sample of new radiocarbon measurements that were modeled in Bayesian frameworks to estimate the timing of settlement, mound building, and abandonment at these two sites. The results suggest that both sites were established around the start of the fourteenth century AD as part of a “little bang” of Mississippian community formation. Both sites then underwent dynamic occupation histories that provide further insight into regional events involving Moundville, how Mississippian communities responded to climate change, and how the initial European exploration of the North American Southeast impacted communities in the UTR.

Kruse, Andrea (USDA Forest Service)**[262]***Public Lands, Lithic, and Gray Material: Laysan Cave*

Laysan Cave is one of the older sites within the Cascades, this precontact site is also one of the few open to the public and accessible within the Gifford Pinchot National Forest. It is a multicomponent precontact site with a range of lithic materials, fauna remains, marine shell, nonlocal materials, and burned huckleberries. Results from the excavations indicate use of the cave began approximately 700 years ago and ended by 400 BP. With only part of the assemblage studied, new research needs to happen because more material was recovered after looting to the site. This project looks at completing analysis of sites within FS collections, publishing more open gray material past and current, and how to share that information with the public. This can be completed by looking at the past lithic analysis, gray literature, and new research to see how new cultural material can be now be shared in a more open manner. At this time looking at the lithic material will be the first step in that process.

Krzepkowski, Marcin [80] see Gembicki, Maciej

Krzepkowski, Marcin [80] see Wysocka, Joanna

Ku Quej, Víctor [202] see Fedick, Scott

Kucur, Ezra (Carleton College), Hayden Denby (George Washington University), Samuel Lee (George Washington University), Sarah Kennedy (Carleton College) and Kylie Quave (George Washington University)**[100]***Interrogating the Past: Intercampus Collaborations to Understand the Impacts of the Pedagogical Narrative in Archaeology Classrooms and Departments*

When we teach archaeology, we are actively creating the discipline and its norms that students may carry with them beyond the course. In this student-faculty co-creative poster we present ongoing results of a collaborative effort to ask questions about the nature and impact of teaching choices in archaeology courses and broader program curricula. Through course-based studies of student engagement and belonging, as well as in-progress evaluations of syllabi, assignments, and program requirements across campuses in the US, we seek to understand current trends in teaching archaeology and how those trends impact students and thus the discipline. We have found that teaching practices that draw from the tenets of antiracist and inclusive pedagogies, and that include active learning and principles of applied social science, are best positioned to increase student engagement and motivate participation in archaeology beyond introductory courses. Besides sharing the current results of this research, we will also share plans for future research and ask readers to participate in our co-creative efforts to reimagine the norms for teaching and learning in archaeology.

Kuhn, Steven (University of Arizona)**[58]***Discussant***Kuhn, Steven (University of Arizona), Dušan Mihailovic (University of Belgrade), Bojana Mihailovic (National Museum, Belgrade), Tamara Dogandžic (MONREPOS Archaeological Research Centre) and Senka Plavšić (University of Belgrade)****[247]***Human Occupation of the Central Balkans during the Last Glacial Maximum: Recent Results from Serbia*

The Last Glacial Maximum (LGM), or Marine Isotope Stage 2, produced some of the most extraordinary environmental challenges faced by *Homo sapiens* during the Pleistocene. Large parts of temperate and subarctic Eurasia were depopulated, as humans retreated to areas with relatively favorable conditions.

Although the Balkans have long been seen as a potential LGM human refugium, archaeological evidence for humans in the area during MIS 2 has been very sparse. Recent excavation and dating projects have identified a number of localities in Serbia dating to just before, during, and just after the LGM: these include Šalitrena Pećina, Bukovac, Velika Pećina, Hadži Prodanova Pećina, Pešturina, Meča Dupka, Dubočka-Kozja Pećina, Velika Vranovica, Pećina kod Stene, Petrovaradin Fortress and Potpeč). These sites show a number of similarities in form, location, and lithic assemblages. These common features enable us to define some basic features of LGM Upper Paleolithic traditions and adaptations in this part of the central Balkans. At the same time, they highlight apparent voids in the existing record of LUP land use during this period.

Kuhn, Steven [55] see Worthey, Kayla

Kuijt, Ian (University of Notre Dame), Meredith Chesson and Gráinne Malone [46]

Exploring the Gray Zone between Archaeology, Historical Records, and Oral History: Developing a Residential Biography of Building 57, Inishark, Co. Galway, Ireland

How do historical archaeologists reconstruct the life-history of residential buildings, and to what extent can archaeology, ethnography, and oral history be combined to generate a life history? The concept of house and home is, of course, culturally, historically, and personally defined. Drawing on archaeological excavations and ethnoarchaeological and oral history research from Inishark, Ireland, we put forth a residential biography of building 57 excavated in 2018 by the Cultural Landscapes of the Irish Coast project. Situated on the western end of the historic village of Inishark, on an island located seven miles off the mainland, building 57 is dry-laid stone structure that was occupied for at least 100 years. Originally a residence, modified many times and lived in by several different families, in its later years the building was converted into a shed to store equipment and food. Based on archaeological excavations and interviews with islanders, we explore the process of homemaking in general, how islanders created social spaces, how they used inside and outside spaces, and how they repurposed the building. This research illustrates how the mobility of islanders between physical residences within islands, often linked to moments in life history, is far greater than previously believed.

Kuijt, Ian [46] see Malone, Gráinne

Kuikuro, Kalutata [61] see Moraes, Bruno

Kulick, Rachel (University of Toronto) [328]

Micromorphology of Earthen Architecture at Palaikastro, Crete

Recent geoarchaeological studies of earthen architecture have demonstrated the social and environmental information that may be gained from combined macroscopic, microscopic, and elemental analyses of mudbricks and degraded building materials. Micromorphology can elucidate construction and maintenance phases, identify technological changes, and differentiate and quantify manufacturing practices and techniques. Additionally, micromorphology can detect taphonomic and pedogenic processes impacting architectural preservation and other aspects of site activities. Earthen architecture and fragments of mudbrick have been found in various contexts among the Minoan structures at the Bronze Age town of Palaikastro, Crete. For example, mudbrick architecture from Building 5 (LM IB) has been extensively studied at the macroscopic level, yielding information on social aspects of mudbrick production practices at Palaikastro. Taking a new microscopic approach, this paper presents micromorphological analyses on mudbricks and degraded earthen architecture from recent excavations (2022; 2013–2015). The results demonstrate the additional socio-environmental data that micromorphology provides in identifying variations in manufacturing techniques, environmental resources, and abandonment and postdepositional processes.

Kulisheck, Jeremy (USDA Forest Service Southwestern Region) and Blair Mills (Cibola National Forest and National Grasslands)

[174]

Fragments of a Mogollon Ritual Landscape in South-Central New Mexico, USA

Recent fieldwork in the southern and southeastern foothills of the San Mateo Mountains of south-central New Mexico has identified caves, rockshelters, rock art, nonstandard settlements, and shrines and other ritual architecture located on hilltops. These finds reveal a landscape of rich cosmological significance to ancestral Pueblo Mimbres and Jornada Mogollon people during the period AD 1000–1400. However, this reconstructed cultural landscape is fragmented due to scattered survey coverage, our incomplete understanding of Mogollon cosmology, and lack of archaeological signifiers for all landscape elements of cosmological significance. Regardless, even this fragmentary reconstruction allows us to view the intersection and interdigitation of the ritual landscape with the landscape of interaction and settlement ecology in this region in a way that site-based approaches to ritual cannot.

Kullen, Douglas (Burns & McDonnell)

[165]

Archaeology of the Nucor Steel Project, Meade County, Kentucky

Nucor Steel Corporation planned and built a major steel recycling facility on the south bank of Ohio River at a location that turned out to be loaded with prehistoric and historic archaeological sites. From 2019 through 2023, Burns & McDonnell undertook archaeological investigations there in the form of survey, test excavation, and site mitigation. This paper reviews those investigations, focusing on findings from two sites where full-scale archaeological excavations took place. Site 15Md458 contained numerous Wyandotte chert flintknapping workshops interspersed with buildings and middens of the historic Glen Fount Plantation. The Craven Crawdad Site (15Md475) was found buried 2 m below the floor of the Ohio River valley, and it contained two stratified Early Woodland components that represent short-term occupations focusing on the production of Adena point preforms. The Nucor Project provided the opportunity to evaluate the efficacy of deep testing as a site delineation method, and of techniques for working safely in deep block excavations. Archaeological conclusions address the locally overwhelming Early Woodland presence, the inscrutable lure of Wyandotte chert, and the Constricted Valley of the Ohio River as an archaeological subregion.

Kulstad-González, Pauline (Independent Scholar) and Theresa Singleton (Syracuse University)

[227]

Kalunga! Identifying Afrodescendant Landscapes in Spanish Santo Domingo, 1502–1822

The first Afrodescendant peoples arrived in the Americas on Spanish ships to the island of Hispaniola in 1492, and by 1502 played an integral role in the development of the colony of Spanish Santo Domingo. Both free and enslaved Afrodescendants undertook most of the labor needed to construct the urban landscapes on the island, as well as the production of sugar and the extraction of metals in rural landscapes. By 1502, however, documents also record Afrodescendant runaway activity on the island. This dichotomy continues throughout the existence of Spanish Santo Domingo, evidenced in historical documents. Yet, few attempts have been made to identify these locations cartographically. This presentation will document attempts to create maps that can guide future Afrodescendant archaeological research in the Dominican Republic.

Kuma, Dela

[250]

Negotiating Local Tastes in Trade Networks: Reflections on Ann Stahl's Contributions to West African Archaeology

My research on local tastes and embodied practices during the Afro-European trade in Ghana is greatly influenced by Ann Stahl's extensive theoretical work in West Africa. The nineteenth and early twentieth centuries in West Africa witnessed a surge in the demand and export of botanical commodities like palm oil. Nonetheless, historical accounts often overlooked the active participation and embodied practices of hinterland people who produced these commodities. In this talk, I suggest that local people and their embodied practices

were central to forming and maintaining trade networks. In Amedeka, southeastern Ghana, where this research is situated, local tastes and their related performances are conceptualized as *nkudzedze* (“pleasing to the eyes”). I draw on Indigenous and Black feminist archaeology perspectives, along with the local performances of *nkudzedze* as a radical framework to decentralize our methodologies and research questions from the Euro-Western gaze and colonial epistemologies that continue to “otherize” local and Indigenous communities. I pay tribute to the influence of Ann Stahl’s research on mine and underscore her efforts to advance theories about Africa’s positionality in regional and overseas trade. Stahl emphasized the significance of Indigenous embodied practices as channels to comprehend Africa’s experiences of global entanglements.

Kuo, Alexandra [42] see Mahan, Samantha
Kuo, Alexandra [41] see Qais, Deepro Sanjid

Kuo, Ying-Hsuan [201] see Hermsmeyer, Isabel

Kupprat, Felix (Universidad Nacional Autónoma de México), Debra Walker (University of Florida), Verónica Vázquez López (INAH/UNAM), Joshuah Lockett-Harris (University of Calgary) and Fernando Flores Esquivel (Universidad Nacional Autónoma de México)
[78]

Settlement Patterns and Chronology in Calakmul and Its Surroundings

Calakmul is the largest site on the northern edge of the Bajo el Laberinto and has been investigated intensively since the 1980s. Previous research has produced valuable data regarding the general urban extent and the Late Preclassic monumental architecture surrounding the main plaza, as well as public, palatial, and some residential groups from the Classic period. Comparatively little has been said about the chronology of its larger urban sphere and peripheries, which is why we have recently started a broad reconnaissance and testing program in this extended area. The preliminary results of our mapping and excavation efforts suggest that Calakmul experienced accelerated urban growth between ca. 450 and 650 CE. The formal configurations of domestic compounds are heterogeneous, ranging from simple, low house mounds to extensive multi-patio complexes. Surprisingly, this development occurred before the major political shift marked by the establishment of the Kanu’l rulers at Calakmul around 635 CE. Another unexpected find was that of formal settlements dating to the Postclassic, a period poorly documented in previous works. This late occupation suggests that Calakmul and the Bajo el Laberinto remained an important locale well after the departure of the Kanu’l and the end of the Classic period.

Kupprat, Felix [78] see Lockett-Harris, Joshuah
Kupprat, Felix [78] see Longstaffe, Matthew

Kurnick, Sarah (University of Colorado, Boulder)
[254]

“Toda la Gente”: Advocating an Intersectional Approach to Heritage Production

Collaborative archaeological approaches recognize that partnerships between archaeologists and members of descendant communities can potentially democratize heritage production and foster a more inclusive—and thus more accurate—understanding of the past. Nevertheless, descendant communities are often themselves hierarchical. Inequalities based on age, gender, ethnicity, and other aspects of identity pervade contemporary social groups, including those that have historically been marginalized. How then can archaeologists avoid perpetuating and reinforcing the inequalities present in their own and in their partner communities? By foregrounding one axis of difference—that between archaeologists and members of descendant communities—do scholars unintentionally minimize other axes of difference, such as those based on gender? This presentation argues that the democratization of heritage necessitates an intersectional approach. Put differently, archaeologists must consider how various aspects of identity combine to create different types of

inequities for different members of descendant communities. To make this argument, this presentation considers the Punta Laguna Archaeology Project, located in the Yucatán Peninsula of Mexico, and specifically a community meeting where the phrase “*toda la gente*,” or “all the people,” was used to refer only to men.

Kurnick, Sarah [305] see Fladd, Samantha
Kurnick, Sarah [221] see Puente, Nicholas

Kurota, Alexander [41] see Greaves, Russell

Kusimba, Chapurukha

[17]

Discussant

Kusimba, Chapurukha

[301]

Climate Change, Disease, and the Collapse of Swahili Urbanism

Complex city-states arose on the East African Coast that were hubs of international trade networks. However, by the seventeenth century, most of these settlements had been abandoned. What were the causes of the Swahili state collapse? Historians and archaeologists have implicated climate change as one of the causal factors in the collapse of highly organized political and social systems. Climate change's effects on the resilience of populations, in particular on health, food security, and disease in East African Coastal societies over the last 1,000 years have not been fully explored. To what extent did water scarcity caused by the Little Ice Age instigate a health crisis? How and in what ways did climate fluctuations and droughts represent an existential threat to ancient societies and political formations in Eastern Africa? What were the effects of climate change on established and taken-for-granted practices around subsistence, settlement patterns, intra- and intercommunity interactions, and the health and well-being of individuals and communities? What archaeological and ecological signatures did these societies leave behind as they struggled to deal with prolonged drought, competition, hostility, and warfare over declining resources? This paper will report preliminary results gleaned from our ongoing research at Gede in Kenya.

Kusimba, Chapurukha [201] see Haileselassie Assefa, Sewasew

Kvetina, Petr (Institute of Archaeology Prague, Czech Republic), Thomas Rocek (University of Delaware) and Jaroslav Ridky (Institute of Archaeology Prague, Czech Republic)

[96]

Food Storage and Processing: A Cross-Cultural Study of the Neolithic/Formative Period of Central Europe and the USA

We introduce the start of an international project focusing on the interpretation of prehistoric food preparation and storage in cross-cultural perspective—both different prehistoric cultures and different traditions of archaeological research. We consider archaeological patterns in Central Europe (the European temperate zone) and in US Southwest, examining the period of early agricultural prehistory (primarily the Neolithic in Central Europe and the Formative in the United States). Although the research regions are geographically and environmentally distant, similar cultural and social adaptations developed: “Neolithic” societies dependent on agriculture, reduced-mobility settlements based on shared community management, limited social hierarchy but a degree of settlement centrality, and in both cases construction of communal/monumental architecture. In both areas, underground silos were used for food storage, and plant seeds were ground using “querns” or “metates.” American archaeologists have traditionally approached the specifics of food storage and processing among pre-state societies from a functional and cultural perspective, since researchers had local ethnographic data available; European approaches have more often focused on chronology and typology. This project builds on research in both regions to analyze the technology and spatial patterns of food processing and storage in this comparative context and perspective.

Kynkäänniemi, Sanna-Mari [151] see Salmi, Anna-Kaisa

La Roche, Christopher (University of Arizona)

[111]

The Gila River Farm Site and Salado Coalescence during the Fourteenth Century in the Upper Gila, New Mexico
Archaeology Southwest and the University of Arizona's Upper Gila Preservation Archaeology (UGPA) Field School has conducted excavations for six field seasons (2016–2019; 2021–2022) at the Gila River Farm Site. This paper evaluates intrasite coalescence between a small migrant community with ancestry linked to the Kayenta-Tusayan area and local inhabitants of Mogollon ancestry within room blocks 3 and 4 of this Cliff-Phase (AD 1300–1450) Salado settlement using distributions of ceramics, ground stone tool attributes, and domestic installations as material culture markers of active and latent cultural identity indicators while also introducing a scalar element to the discussion of the Salado phenomenon in this area of southwestern New Mexico. Results from the Gila River Farm Site indicate a fully coalescent community within Room Block 4 by the time of depopulation.

Labarca Encina, Rafael [337] see Ugalde, Paula

LaBianca, Oystein

[17]

Shaping Global History Narratives of the Southern Levant: Lessons Learned from Tall Hisban and the Madaba Plains Region in Jordan

The Southern Levant region is critical to our understanding of the nature of globalization and connectivity in prehistoric as well as historical era contexts. This presentation will explore the challenges in shaping WST and global history narratives of the past that bridge micro (local) and macro (global) perspectives. Drawing on his experience working at Tall Hisban and the Madaba Plains Region in Jordan, the author will share lessons learned in his quest to situate the long-term history of this particular historical site on a global canvas. Examples of approaches to bridging micro-macro-perspectives will be illustrated with reference to various methodological and interpretive lenses, such as zooarchaeology, food systems, environmental studies, connectivity, Great and Little Traditions, and the concepts of the Great Acceleration and Anthropocene. Ultimately, the author argues for the relevance of archaeology in not only advancing WST and global history but also understanding the accumulative impact of the human eco-engineering activities that have led to the planet's current climate crisis. The presentation aligns with themes discussed in the publication "Levantine Entanglements: Cultural Productions, Long-Term Changes, and Globalizations in the Eastern Mediterranean" (2021).

Labrador, Angela (Johns Hopkins University)

[64]

Discussant

Lacoste Jeanson, Alizé

[230]

Maya Funerary Diversity: A Nonlinear Perspective from Palenque, Chiapas

Ancient Maya land is characterized by a great diversity of funerary practices. The settlement of Lakamha' (Palenque) sharply evidences such heterogeneity: pluralism is found in terms of places of inhumation, types of containers, number of people per grave, grave goods, postmortem treatments, positions, and orientations of the body. Nonetheless, a little more than half of the burials share a basic pattern: primary inhumation in a container (monumental to very simple) of one person extended on the back, arms alongside the body, head to the north, with clay pots. The vast majority of the burials present non-taphonomical movements that

demonstrate human activity taking place inside the graves after the first burying event. Funerary treatment does not seem to depend on sex, but age categories do demonstrate distinct practices and subadults are scarce. In archaeo-thanatology, such funerary diversity is usually interpreted as the presence of distinct populations in the same geographical area. The absence of various identifiable models suggests that Lakamha' could have been a sacred city where communities, family nuclei or corporative groups of similar cultural forms but different geographical origins congregated periodically. Other elements such as the type of agriculture practiced and Lakamha's topographic situation support such a perspective.

Lacoste Jeanson, Alizé [230] see Lozada, Josuhé

Ladron De Guevara, Sara

[216]

Juego y muerte: Imágenes de un ritual / Game and Death: Images of a Ritual

Images from Las Higueras mural paintings as well as from El Tajín bas reliefs depicting ball players and sacrifice related to the ritual will be presented and discussed. Musicians, ballplayers, and divinities seem to have specific roles. Were the losers or the winners sacrificed? Chroniclers and images will give some clues on the matter.

LaDu, Daniel (University of Southern Mississippi) and Sean McCraw (University of Southern Mississippi)

[154]

Mississippi River Folk: Dugout Canoe Form, Function, and Frequency in the Magnolia State

In 1986, Sam McGahey published the first compendium of Mississippi dugout canoes. He listed the attributes of eight watercraft including recovery location, date of manufacture, wood type, method of construction, and dimensions. McGahey also included a composite drawing to better facilitate comparison. While dugouts are only infrequently encountered, they reveal key information about the means and mechanics of transportation and encode information about identity, subsistence, trade, migration, and warfare otherwise invisible in the archaeological record. Further inhibiting our understanding of this important artifact type is the cost of preservation and inconsistency of documentation. When resources allow, dugouts are installed as the centerpieces of exhibits, such as the Swan Lake Canoe on display at the Museum of Mississippi History. In other instances, they are pulled from a riverbank or lake bed and left to quickly deteriorate. This paper updates McGahey's list of canoes and surveys the variation present within the Magnolia State. We seek to encourage local reporting of dugouts as they are recovered by fostering relationships with avocational communities, and explore expedient, standardized means of documenting form through the creation of high-quality models. We conclude by reflecting on the current state of dugout research and highlighting future avenues of study.

Laffoon, Jason (Leiden University)

[334]

The Development and Application of Isoscapes for Archaeological Provenance Studies in the Neotropics: Recent Developments and Future Directions

Isotope studies have become a common and effective method for inferring the geographic origins of a wide range of materials in various research disciplines, including archaeology. In recent years, such isotope approaches have also become more rigorous and quantitative, and increasingly make use of isoscapes (isotope landscapes) = maps of spatial isotopic variation. This paper provides an overview of the development and use of isotope-based geographic assignment approaches in the archaeology of the New World Tropics. I critically review a wide range of issues involved with the application of such approaches to this area of the world including: the selection of regionally appropriate proxies, the conversion of isotope datasets into isoscapes, spatial modeling, multi-source mixing, missing data, interval versus probabilistic approaches, and integrating multiple isotope data. I conclude with a brief reflection on the recent advances, continuing challenges, and future directions of isotope provenance studies in the Neotropics.

Lagarde, Patricia (Walters Art Museum)**[27]***Faced Façade: New Interpretations of Chavín's Tenon Heads*

The sculptural figures at Chavín de Huántar have long been considered potent symbols of a unified religious tradition across the Andes mountains. Today, Chavín is recognized as a Formative period pilgrimage center located in the highlands of modern-day Peru. It is known for its extensive sculptural program, and particularly for the tenon heads that once embellished the exterior walls of the monument. The anthropomorphic heads feature elements such as fanged mouths, contorted expressions, and serpents slithering across the surface of stylized faces. Although previous studies have argued that the heads are representations of shamans undergoing hallucinogenic transformation, this paper reveals that they are one-of-a-kind figures at a pivotal state on a spectrum of containment and release. Metaphorical substitutions for the eyes, nose, and mouth of the figures were leveraged to distinguish Chavín as unique across an increasingly homogenizing landscape.

Lagos, Samantha (Southern Methodist University)**[172]***Storage Pit Prospection and Capacity Estimation in Aotearoa New Zealand: A Comparison of Surface Detection Methods*

Lidar has revolutionized the way we survey for surface-visible archaeological features. Our ability to relatively quickly capture and assess large landscapes for features enables us to understand human activity across large spatial scales with significantly less time and financial investment than pedestrian or other forms of remote survey alone. As these data become cheaper to collect and more readily available, surveyors have developed a number of computer processes to speed up feature prospection. Subterranean storage pits are one archaeological feature that has been subject to extensive survey in a number of different environmental and cultural contexts. Often visible from the surface as eroded, shallow depressions, accurate surface prospection methods are not only key to identifying these features across landscapes, but to understanding their distribution and sizes; this has clear implications for our understanding of their uses in the past. However, detection of surface features from remote data must balance concerns around accurate identification with time investment and spatial coverage. Storage pits, or *rua*, are one of the most commonly recorded archaeological features in Aotearoa New Zealand. This poster explores a number of lidar-based detection methods and compares pit count and dimensions against data from these, pedestrian survey, and archaeological site maps.

Laguer-Díaz, Carmen [127] see Pestle, William

Laló Jacinto, Gabriel [230] see Paris, Elizabeth

Laluk, Nicholas [331] see Vidrine, Maria

Lam, Mimi [55] see Alsgaard, Asia

Lam, WengCheong (Chinese University of Hong Kong)**[315]***Chair*

Lam, WengCheong (Chinese University of Hong Kong), Wenli Zhou (IHNS, CAS), Shengqiang Luo (Chenzhou Museum), Ji Zhang (University of Science and Technology Beijing) and Linheng Mo (Hunan Provincial Institute of Archaeology)

[315]

A New Perspective on the Ore Source Supply and Potential Provenience of Han Bronzes from the Broader Lingnan Region

Previous lead isotopic studies have noted significant shifts in the choice of ore sources for Western Han bronzes, coinciding with the expansion of the imperial network. While existing literature has highlighted the prevalence of ore sources from the Eastern Qinling region during this era, the importance of ore sources from the broader southern frontiers, notably the southern Hunan-Nanling mountain ranges, has been underexplored. Given the substantial role of these regions as suppliers of raw materials during the Eastern Zhou period, it is crucial to investigate whether local sources continued to be utilized during the Western Han period. This study presents novel results from lead isotopic analysis conducted on Han period artifacts from the broader Lingnan region. When combined with legacy lead isotopic data, our research indicates that the majority of vessels discovered in Hunan and Guangdong were made using ores from the Nanling mountain ranges (southern Hunan and northern Guangxi). However, other types of products exhibit a distinct pattern originating from nonlocal ore sources. This fresh dataset illuminates the sustained use of ore sources from the southern frontiers during the Han period, providing valuable insights into the diverse changes within the bronze industry during the consolidation of the Han state.

LaMartina, Emma and Isobel Coats

[41]

Community Archaeology in the Jemez

Over four weeks in the early summer of 2023, a community-based archaeological project was conducted to re-record Whan hang kya nu Pueblo in fulfillment of a master's project in public archaeology at the University of New Mexico. Whan hang kya nu Pueblo is a prehistoric site located in the Jemez District of Santa Fe National Forest and has been continuously monitored for decades. However, it is still subject to interest and visits from the general public and, as such, is vulnerable to looting and social trails. Volunteers drawn from the local community were able to record and assess these impacts over the course of the project through pedestrian survey. In this way, community members were exposed to a variety of archaeological methods and were able to experience the importance of archaeology and site protection first-hand. There were several key takeaways from this project, such as best practices for communicating archaeological significance to the general public and what is necessary to recruit and sustain volunteer involvement in a community-based project. Ultimately, the continued integrity of Whan hang kya nu Pueblo was confirmed after a decades-long break in recording.

Lamb, Angela [334] see Madgwick, Richard

Lamb, Angela [334] see Mion, Leïa

Lamb, Trevor (Boston University)

[168]

Parsing the Pits: Cooking Techniques in the Kachemak Period Kodiak Archipelago

Archaeologists frequently encounter pits filled with charcoal and fire cracked rock in the archaeological record which testify to past culinary practice. However, it is challenging to determine how these pits were used to cook food from general observation alone. Here I employ paleoethnobotanical and zooarchaeological analyses to determine how pits were used to transform meat and plants into food at the Kachemak period Nunalleq (KAR 309) site in Alaska's Kodiak archipelago.

Lamb, Trevor [67] see West, Catherine

Lambert, Bart [334] see Spros, Rachel

Lamothe, Francis (Université Laval), Karine Taché (Université Laval), Cezin Nottaway (Kitigan Zibi Anishinabeg First Nation), Solomon Wawatay (Kitigan Zibi Anishinabeg First Nation) and Marie Trotter (Université de Montréal)

[202]

Cookin' with Cezin: Experimental Archaeology and Traditional Anishinabe-Algonquin Foodways

Excavations carried out since 2016 on the shores of Grand Lac Nomingue, Quebec, Canada, have uncovered thousands of ceramic sherds in the ancestral territory of the Anishinabe-Algonquin First Nation. These discoveries demonstrate the use of pottery by a nomadic population and lipid analysis show that various products were prepared in these containers, whether game, fish or plants. As part of a collaborative project, internationally renowned chef Cezin Nottaway, assisted by her father Solomon Wawatay, joined our research team to re-create traditional recipes prepared in replicated vessels and cooked over open fires. These replicated vessels will be sampled and lipid analysis will be used to compare their chemical signatures with archaeological contexts. This contribution offers an overview of the results obtained during the first season of this culinary archaeology project.

Lamoureux-St-Hilaire, Maxime (Mount Royal University) and Rubén Morales Forte (Tulane University)

[98]

Slowing Down the Archaeological Process in Dolores, Petén, Guatemala

Maya archaeology has always relied on the labor and expertise of field technicians hired from heritage communities across the modern nations of Guatemala, Mexico, Belize, Honduras, and El Salvador. Some of these communities, like Dolores, Guatemala, have been continuously engaged with archaeological projects for several decades, granting its members multi-generational expertise on both Maya civilization and archaeological practice. These field technicians—or as we prefer to call them, grassroots archaeologists—and academic archaeologists have fruitful episodic collaborations. Yet, a disjuncture exists between (1) grassroots archaeologists and the production of archaeological knowledge and (2) academic archaeologists and the heritage communities that are home to grassroots archaeologists. The Dolores Slow Archaeology Program aims to address these disjunctures by slowing down the archaeological process to adequately integrate grassroots archaeological professionals from the Dolores community as active agents in the design of a sustainable and collaborative project. Join us to hear about the results of our first season of work in Dolores.

Lamoureux-St-Hilaire, Maxime (Mount Royal University)

[292]

Discussant

Lamp, David [219] see Gingerich, Joseph

Lancaster, JD [262] see Wriston, Teresa

Lancelotti, Carla (Universitat Pompeu Fabra and ICREA)

[87]

Resilience and Adaptation to Drylands: Long-Term Knowledge as a Path to Sustainable Agricultural Practices in Drylands

The incorporation of time-tested practices, encompassing Traditional Knowledge (TK), Local Knowledge (LK), and Indigenous Knowledge (IK), into sustainable agrifood system development has gained substantial traction. These practices are designed to address challenges such as food sustainability, food sovereignty, and enhancements to agrosystems. TK is defined as “knowledge honed over centuries and adapted to local

cultural and environmental contexts.” Yet, while TK encapsulates millennia of experiential wisdom, the insights derived from Long-Term Knowledge (LTK) have yet to be fully harnessed. Many ancient systems demonstrated greater longevity than modern infrastructure and were often inherently more sustainable consuming less energy, being easier to operate and maintain, and having more communal governance structures. In this talk I will present the results of RAINDROPS, an interdisciplinary project that combines experimental cultivation, ethnoarchaeology, modeling, and archaeobotany to trace the time depth of cultivation of drought-tolerant crops in drylands. I present two case studies related to the Indus Civilization in Pakistan and the Askum Civilization in northern Ethiopia. The results show how traditional rainfed cultivation dates back several millennia and has remained active since the present, albeit in small, fast-disappearing pockets.

Lancelotti, Carla [288] see D’Agostini, Francesca

Landazuri, Heather (University of Maine, Orono)

[200]

Seabirds as Proxies for Past El Niño Events in Coastal Peru: An Archaeo-ornithological Approach

This thesis sets an initial foundation for an archaeo-ornithological approach to understanding past El Niño events on the coast of Peru and the use of avifaunal remains as proxies for ecological conditions. Here I examine the extent to which El Niño phenomena could influence avifaunal resources and the effect this would have had on the subsistence practices of Andean coastal communities through time. Taking a human-ecodynamics approach, I also examine ethnohistoric records, including published oral histories, and early Peruvian visual culture (e.g., ceramics, geoglyphs, regalia, textiles) to further guide my understanding of the relationship between coastal societies and their local ecology. Based on the apparent human-Aves ecodynamics between coastal Peruvian societies and local avifauna, I propose that marine avifauna could have acted as sentinels for ecological conditions, offering coastal occupants a warning of impending change. In some cases, avian responses to El Niño (e.g., massive die off, mass migrations, nest abandonment) could have presented a boon to industrious hunter-gatherers, a topic I also explore. Further paleoenvironmental research potential lies in determining the effects that different varieties or “flavors” of El Niño Southern Oscillation (Central Pacific, Coastal) would have posed on early subsistence practices and adaptation strategies.

Lane, Kevin (CONICET, IDECU)

[1]

Past Water Futures: Rehabilitating Ancient Dams for Present Use

Water is essential for life on earth. In the twenty-first century, water scarcity is increasingly seen as the main threat to human world economies. This is especially true of the Peruvian Central Andean highlands where lack of water is understood by experts as the single most threatened natural resource in the face of climate change and ever-retreating tropical glaciers, a sentiment echoed by local governments and especially rural communities. The Past Water Futures project is engaged in the rehabilitation of ancient dams for modern use in the Ancash region of north-central Peru. Our project addresses the live issue of water security and community resilience in the rural Andes. Ancient dams represent a tried-and-tested answer to water scarcity in the region. Ancient dam rehabilitation is a community-led, low-carbon, low-cost, and low-maintenance alternative to modern cement micro-dams, providing clean water, local economy growth, and protection of the natural and heritage environment. We contend that modern engineering can only provide partial solutions to increasing water fragility in the Andes, and that the marriage between past and present knowledge and technology can deliver a better, locally informed answer to future water stress and climate change in the Cordillera Negra and further afield.

Lane, Kevin (CONICET, IDECU)

[242]

Chair

Lane, Kevin (CONICET, IDECU)**[242]***Water, Maps, and Mountains: Shifting Water Taskways in the Andes*

In the past as in the present water was and is a central material element of the communities of the highland Andes. Underpinning their relationship with water and the taskways this entails has been the constant negotiation and impact of human-human and human-ecology relationships. In this regard, these populations' relationship with water has changed through time, influenced by warfare, colonization, and social change. Here, I examine this shift from the late prehispanic period (AD 1000–1532), through the Spanish colonial period (AD 1532–1826), and down to the present in the Cordillera Negra, north-central Andes. I trace how water taskways and the hydraulic architecture that sustain canals, amunas, reservoirs, and dams have swung majorly from a cosmological-economic to a commodity-economic model. In this regard, a loss of religious resonance in regard to water in the past was supplanted by the historic and present-day critical need to secure scarce hydric resources in the face of, respectively, colonial-elite oppression and climate change. Nowadays, water fragility has further precipitated a shift from artisanal constructions of stone and clay toward a development-led agenda where cement is king, with a growing disavowal of ancestral knowledge and taskways. Attempts to counteract this trend often meets considerable resistance.

Lane, Kevin [193] see Williams, Veronica

Lane, Kris (Tulane University)**[220]***The Once and Future Sindaguas of Barbacoas: A Reflection*

This paper revisits frontier wars in southwest Colombia in the first half of the seventeenth century. Some debate has arisen regarding a bellicose Barbacoan group known as Sindaguas. Were they a long-established people or “nation” as their Creole-Hispanic conquerors claimed, or were they a more fluid entity engaged in their own expansion project?

Lang, Andreas [113] see Brown, Antony

Lang, Andreas [113] see Fallu, Daniel

Langlais, Mathieu [219] see Naudinot, Nicolas

Langley, Andrew [257] see Little, Aimée

Langlitz, Meredith (Archaeological Institute of America)**[64]***Discussant***Langlois, Meghan (McMaster University) and Erin Riley (University of Colorado, Boulder)****[80]***Understanding Resource Allocation and Dietary Stress through the Presence of Scurvy in Nonadults from Gać and Dzwonowo, Poland (Fourteenth to Sixteenth Centuries)*

As a result of the energy requirements related to growth and development, nonadults are more susceptible to biocultural change than adults, making them ideal proxies to examine environmental stress within a population. The village of Gać and town of Dzwonowo (fourteenth to sixteenth centuries) in Greater Poland provide a unique opportunity to examine the impact of biocultural stress on populations for which there is little historical or archaeological data. Shifting sociopolitical structures and climatic change during the Late

Medieval period in Poland led to increasing social stratification and unequal access to resources. This study uses macroscopic lesions for scurvy to examine disease prevalence in juveniles and adolescents to compare socioeconomic status, access to resources, and dietary diversity between Gać and Dzwonowo. Nutritional status is not expected to differ substantially between sites, due to the generally undiversified medieval Polish diet based on grains and small amounts of meat and fish, with few fresh plant products. Preliminary findings suggest a scurvy prevalence rate of 10.4% for the village of Gać, a higher rate compared to contemporary Polish sites. This study aims to shed light on the biological consequences of social change in medieval Greater Poland. ***This presentation contains images of human remains.

Lanoë, François [136] see Bridgeman, Lauren

Lanoë, François [174] see McCaig, Haley

Lanoë, François [168] see Smith, Gerad

Lanoë, François [333] see Zedeño, María Nieves

Lans, Aja (Johns Hopkins University) and Daniel Sunshine (Virginia Commonwealth University) [89]

Black Bodies and the Making of Race in Antebellum America

University and museum collections containing human remains belonging to members of the African diaspora have recently come under scrutiny and for valid reasons. The curation of the bodies of Black individuals continues to inflict violence and reinforces the notion that Black people are objects, not humans. During the winter of 2020/2021, it was revealed that the Peabody Museum of Archaeology and Ethnology at Harvard University, located in Cambridge, Massachusetts, housed the remains of 15 individuals of African descent who were likely to have been alive during the time of slavery in the United States. This paper focuses on three Black Ancestors whose skulls traveled with Dr. Jeffries Wyman (1814–1874) when he left Hampden Sydney Medical College in Richmond, Virginia, to return to his alma mater, Harvard. Two skulls belong to men who were executed by the state of Virginia, and one belongs to an unnamed woman. Uncovering these Ancestors' itineraries and determining where they might be laid to rest requires an interdisciplinary collaboration between historians and bioarchaeologists. By combining archives of documents and bone, a case is made for the return of these individuals to a community that will mourn them.

Lans, Aja (Johns Hopkins University)

[143]

Discussant

Lape, Peter [50] see Echavarri, Mikhail

Lapham, Heather [260] see Briggs, Rachel

Laplana, César [25] see Baquedano, Enrique

Lara-Pinto, Gloria (Universidad Pedagógica Nacional Francisco Morazán, Honduras)

[296]

Converting Monumental Landscapes to Human Dimensions: Ancient Community-Building Processes in Southern Honduras

A couple of years ago some good meaning citizens offered to donate complete ceramic pieces along with other objects they had “collected” from their properties to the regional campus of my university in southern Honduras. These same local citizens declared themselves a priori as descendants of the “Chorotega.” At

these locations, a fairly high number of sherds could be observed mixed with construction debris, but without the authorization of the IHAH, I declined to make a more thorough inspection of the sites, or an appraisal of the pieces. However, I was mystified by a massive, incised boulder in Orocuina's main plaza (Cholulteca), which was clearly out of place. My guides told me of other locations where massive boulders had engravings, and others could be found directly on cliffs bordering watercourses. I did a preliminary survey, to find the locations were impressive because of the very monumentality of the landscape. Beyond that, it seemed as if the engravings in boulders and cliffs were enhancing significant geographical features and natural borders. I am persuaded to side with Notroff, Dietrich, and Schmidt (2014), and venture to qualify these locations as monumental landmarks for the peoples involved in community buildings processes and group cooperation.

Lara Tufiño, Pamela (Indiana University)

[216]

Ritualidad acuática en Media Luna y su relación con el juego de pelota

El análisis del contexto arqueológico sumergido, Media Luna, localizado en San Luis Potosí, México, ha permitido profundizar en los ritos mortuorios y en los actos de oblación que las comunidades de Río Verde realizaban en torno al agua durante el periodo Clásico y Posclásico Temprano (500-1000 dC). Sin embargo, recientes trabajos de arqueología subacuática, además de estudios iconográficos y contextuales, han identificado objetos arqueológicos relacionados con el juego de pelota, los cuales también fueron depositados al interior del manantial. La presencia de figurillas que posiblemente representan jugadores, fragmentos de yugos, así como la sacralidad acuática del espacio donde se localizan, aunados a la abundante presencia de canchas en la región, ha permitido proponer una posible relación entre algunos de los elementos rituales del juego de pelota y los ritos acuáticos llevados a cabo en Media Luna, ambos vinculados al inframundo en su aspecto mortuario y de fertilidad.

Larios, Jennifer (University of Michigan)

[314]

Excavations of Early Postclassic Commoner Households at Jalieza, Valley of Oaxaca, Mexico

This paper summarizes the results of two seasons of excavations at Cerro Tecolote, the Early Postclassic (AD 750–1000) settlement at Jalieza in the southern Valley of Oaxaca, Mexico. While the Valley of Oaxaca has been the focus of intensive and seminal archaeological research for over a century, the Early Postclassic is poorly understood in this region. The Early Postclassic has been referred to by scholars as a time of “changing politics.” It marks the transition from a highly centralized state-level society to a decentralized society governed by small competing kingdoms. The excavations summarized in this paper targeted domestic terraces at Cerro Jalieza to explore how non-elite households were affected by the collapse of the Zapotec state. Furthermore, this project presents one of the first attempts to investigate the scale of these “changing politics.”

Larkin, Karin (University of Colorado, Colorado Springs)

[254]

Chair

Larkin, Karin (University of Colorado, Colorado Springs) and Kaitlyn Davis (University of Northern Arizona)

[254]

Diversifying Heritage: A Foundation for Democratizing Heritage Production

Archaeological practice has benefited from including diverse stakeholders in the production of narratives around heritage, which can result in democratizing heritage creation. If done well, it can lead to a more democratic production of knowledge around heritage. Democratization heritage production involves shifting power dynamics in who “rules” over the creation of narratives and investing authority in the related “people”

or descendant communities. Because of archaeology's roots in colonialism, democratizing the discipline is no easy task. This can be especially difficult to accomplish in compliance-based work and few archaeologists are trained in how to do this work. Here, we situate these ideas theoretically, in practice, and offer background on the topic.

Larmon, Jeannie (Historical Research Associates)

[209]

Environmental Personhood and the Management of Cultural Resources

Over the past two decades, there has been a renewed interest in the concept of Environmental Personhood, which grants particular natural entities with legal personhood with the intent of reorganizing anthropocentric hierarchies and better protecting the environment. These features, including Te Awa Tupua in New Zealand and Mutesheku Shipu in Canada, have been granted and maintained legal designation. Of course, though under different names, concepts of Environmental Personhood have long been deeply integrated with many Tribal experiences of the world. Many Indigenous ontologies understand the co-constitution of living and nonliving entities—that no material entity is unhinged from material and immaterial intrusions. Just as Karen Barad notes, “Existence is not an individual affair” (2007:ix). The co-constitution of the human and nonhuman and of living and nonliving should be considered in the interpretation and management of cultural resources. This paper explores how considering archaeological things and spaces in the context of movements of Environmental Personhood pulls those landscapes from the past, through the present, and into the future.

Larrick, Dakota (University of Arizona, Laboratory of Tree-Ring Research), Charlotte Pearson, Christopher Baisan and Nicholas Kessler

[176]

New Dendrochronological and Radiocarbon Dates for Northwest Mexican Cliff Dwellings

Over the years, several thousand archaeological wood samples have been collected across Northwest Mexico, but dating them has proven problematic because of short tree-ring sequences, poor sample quality, and complex growth patterns. A majority of these originated in cliff dwelling sites, which form a central part of an interregional network of relatively dated archaeological phases. An estimated 200 cliff-dwelling sites have been identified in Chihuahua (Gamboa and Baca 2013) and a smaller yet still significant number in Sonora. Only a handful of approximate dates for a subset of the sites have been published, and these are characterized by wide ranges of uncertainty. In this study, we present preliminary results of a new program of research combining tree-ring dating and high-resolution radiocarbon dating in an attempt to overcome these issues and present a comprehensive chronological framework for the region. This framework will assist in not only refining cultural chronologies but also prove useful in facilitating paleoclimatic reconstruction of seasonal precipitation and drought periods several centuries earlier than previously possible. Preliminary results indicate a pattern of occupation between approximately AD 1100 and 1250, corresponding to the Viejo and Early Medio periods per Whalen and Minnis (2009).

Larsen, Leah (University of Michigan) and Matthew T. Brown (University of Michigan)

[171]

Viewshed and Network Analysis of Late Formative (600 BCE–200 CE) Chit'apampa Cuzco, Peru

Cuzco, Peru, has long been recognized as an important archaeological area in the Andes. Despite this recognition, earlier periods prior to the emergence of the Inka state remain under-researched, especially regarding pre-Inka political organization. In particular, the Late Formative (600 BCE–200 CE) is a period in which several important political transformations were hypothesized to occur. These transformations include increasing inequality, potential emergence of hereditary status positions, differing defense strategies, and the rise and fall of several important polities throughout the Cuzco region. One such area where these changes occurred is in the Chit'apampa Basin—just north of Cuzco. This poster utilizes the Hanan-Cuzco survey data as well as excavation data from a hypothesized center in Chit'apampa, Muyumoqo, to reevaluate existing hypotheses generated from the original survey data. Our work demonstrates that the site of Muyumoqo was

likely more important in regional political development than previously thought and provides promising lines of research to reassess other areas of Late Formative Cuzco.

Larson, Bruce [267] see Ohman, Alexis

Larson, Kara (University of Michigan)

[85]

Reassessing Herd Management Strategies in the Early Bronze Age of Southern Israel-Palestine: Preliminary Insights from Tell el-Hesi

Current discussions of herd management strategies employed in the Early Bronze Age III (EB III) in southern Israel-Palestine are often painted with a generalized brush. However, emergent data from the early urban EB III site of Tell el-Hesi, Israel, suggests a site-level perspective is required, particularly during periods of social stress and urban development. Previous excavations at Tell el-Hesi in the 1970s revealed a portion of the EB IIIA fortification wall and a workshop/market quarter, and renewed excavations in 2023 uncovered a portion of an EB IIIA domestic neighborhood. This paper combines faunal data and new carbon and oxygen isotopic faunal data from the workshop/market quarter and new faunal data from the domestic neighborhood excavations to form a comprehensive understanding of herd management strategies employed at EB IIIA Tell el-Hesi. In comparison to other sites in the region, results indicate that a site-level perspective reveals a more diverse range of herd management strategies in the face of newly emergent urban living in southern Israel-Palestine than previously suggested. This paper is inspired by Richard Redding's models of sheep/goat management, his repertoire of work on domesticated faunal remains, and the rise of social complexity in the Ancient Near East.

Larson, Kara [169] see Luurtsema, Anna

Larson, Kara [286] see Tutak, Danielle

LaRue, Chuck [306] see Whittaker, John

Lasater, Trey [316] see Reinhardt, Abigail

Lasater, Trey [281] see Smith, Heather

Lashley, Emma

[283]

Ground-Penetrating Radar and Photogrammetry Survey of Laurel Hill Cemetery: An African American Cemetery in Western Pennsylvania

The Laurel Hill Settlement was a small, mountaintop African American settlement that was located in what is now Laurel Ridge State Park west of Johnstown, Pennsylvania. The settlement was formed sometime before 1825 and may date back as far as the late 1700s. It is unclear how large the settlement was and how many families lived there at any given time during its occupation. One of the only remaining above ground signs of the community who once lived at the site is a small cemetery. The cemetery has only a few remaining grave markers and likely contains a large number of unmarked burials. This poster presents the preliminary results of ground-penetrating radar (GPR) and photogrammetry surveys of the cemetery as well as historical research about individuals known to be interred at the site. The goal of this project is to understand the extent and layout of the cemetery and to discover what information the cemetery can provide on community size and the individuals who once lived in this community.

Lassen, Robert (AmaTerra Environmental, an ERG Company)**[335]***Chair***Lassen, Robert (AmaTerra Environmental, an ERG Company)****[335]***A Lithic Cache from the Crane Dune Site (41CR61), Crane County, Texas*

AmaTerra Environmental, an ERG Company, initially recorded site 41CR61 during a survey of a proposed highway expansion for the Texas Department of Transportation in 2019. The site was situated on a stabilized sand dune, and the presence of a buried dark earth anthrosol bearing multiple cooking features prompted data recovery excavations. During those excavations, an intact lithic cache containing 65 Edwards chert flake blanks and one Marshall dart point was recovered. The artifacts were stacked in seven layers of decreasing diameter, indicating they were buried in a pit. Analyses included minimum analytical nodule (MAN) analysis, platform/bulb descriptions and measurements, cortex percentage, dorsal scar counts and orientations, overall measurements, number of modifications, low-power use wear, attempted refitting, and general descriptions. The results indicate that one MAN type dominated the assemblage with three others present, that flakes were removed from large cores with hammerstone percussion mostly in one preferred orientation, and a lack of refits indicates selective removal of blanks from the procurement location. Overall, the assemblage appears to have been an insurance cache of nonlocal, high-quality lithic material that was stored for future usage. The Crane cache provides a glimpse of procurement and/or trade patterns in an understudied region of western Texas.

Latorre, Claudio [119] see Sitzia, Luca

Lattanzi, Gregory (New Jersey State Museum)**[8]***I'm Only Human: A Case Study in the Problems and Progress in Achieving the Intent of NAGPRA*

In April 2023, one of the largest and most complex NAGPRA repatriations occurred in the northeastern United States. The Abbott Farm NHL repatriation included major museums, three federally recognized tribes, and the reburial of around 200 ancestors and over 10,000 associated funerary objects. As such, issues surfaced associated with the understanding of artifacts, chronology, context, interpreting the archaeological record, all of which can restrict interpretations of assigning cultural affiliation. Additionally, working with multiple museums, federally recognized tribes, and understanding different state burial laws and reburial across state lines were problems where solutions needed to be quickly sought. This presentation lays out those problems, discusses the solutions, and how to go about them. NAGPRA is a continual process of learning, understanding and growing; it is all about what it is to be human.

Lau, George (Sainsbury Research Unit, University of East Anglia)**[81]***Chair***Lau, George (Sainsbury Research Unit, University of East Anglia) and Milton Luján Dávila (PIARP)****[81]***Before the Cults of the Condor and Catequil: The Pre-Recuay Occupation at Pashash, Ancash, Peru (ca. 500 BCE–100 CE)*

Recent field investigations at the hilltop site of Pashash clarify key diachronic changes during the rise of segmentary lordships in the Pallasca highlands of northern Ancash, Peru. Ceramic, radiocarbon, architectural, and ancillary contextual evidence help to reveal local cultural patterns tracking the Pashash settlement from a small, unassuming agropastoral community during the Early Horizon to a seat of regional and cultic power for

Recuay groups by about AD 100. “Formative” period wares disappeared, and new polychrome styles appeared with a dramatic uptake of fancy prestige objects. Interestingly, great intensification of camelid use predated political consolidation, while new forms of monumental architecture and Recuay’s distinctive imagery on pottery and stone sculpture appear to have emerged *sui generis* as part of an innovative ideology of authority.

Lau, George [81] see Brito Salvador, Mirko
Lau, George [215] see Leishman, Kendra

Lau, Hannah (Hamilton College), Alan Farahani (SciScope Solutions), Sarah Whitcher Kansa (Alexandria Archive Institute) and Benjamin Porter (University of California, Berkeley)
[85]

Local Organization in Imperial Settings: Evidence from Late Antique and Middle Islamic Dhiban, Jordan

One of the many intellectual legacies of Richard Redding’s work is his exploration of how local communities made provisioning decisions to meet both their own local needs and demands by political authorities. This paper examines these themes among inhabitants of ancient Dhiban, Jordan during the Late Antique (ca. 600 CE) and Middle Islamic (ca. thirteenth–fourteenth centuries CE) periods. During the Late Antique period, Jordan was under the nominal control of the Byzantine Empire and taxation burdens were organized and met at a local level. In the later Middle Islamic period, Dhiban was part of the Balqa region of the Mamluk Empire. Using zooarchaeological and paleoethnobotanical data from contexts dating to each period we explore the choices inhabitants made in agropastoral production and their integration in regional systems that brought crops and animal products from other areas of southwest Asia into their larders. These provide evidence of regional integration, predicated on both taxation demands and the exchange networks facilitated by these imperial entities.

Lau, Hannah [42] see Fiore, Matthew
Lau, Hannah [284] see Johnson, Kimberly
Lau, Hannah [199] see Mogauero, Megan

Law, Randall [86] see Kenoyer, Jonathan

Law Pezzarossi, Heather (Syracuse University)
[209]

Basket Pedagogies and Other Object Lessons

How can we learn from an object? How is that different from learning about an object? In a class project, I asked students to undo institutionalized silences and challenge dominant narratives with museum objects that appear to be mute. We studied three O’odham baskets housed at the Syracuse University Art Museum that have scant associated provenience and provenance. Like many museum objects, they have spent much of their tenure in storage, propped up with tissue and foam and the ideals of Western heritage conservation. But these conditions, while good for the longevity of the fragile fibers, hasten the erosion of the object as a vibrant source of knowledge. I asked students to seriously consider what lessons the baskets held, and for whom. I challenged students to resituate the baskets as nodes in a larger network of relationships, yet to be acknowledged. The baskets defied student attempts to access the lessons they thought they were entitled to. Instead, lessons reached students according to what they were ready to take responsibility for. They offered the students tangible clues about socioecological networks of gatherers, willows, and rivers; and settler colonial interruptions, and wove these narratives together in ways that surprised us all.

Lawrence, Dawn (National Forests in Florida, US Forest Service) and Jeffrey Shanks (National Park Service Southeast Archeological Center)

[329]

The Fall of Vicksburg: Approaches to Landslide Archaeology in a National Cemetery

In May 2020, NPS archaeologists initiated an emergency response at Vicksburg National Cemetery, where a massive landslide affected numerous Civil War—era graves, primarily those of the first US Colored Troops (USCT). Working on a partially collapsed terrace, the archaeologists deployed innovative strategies and methodological approaches to recover disturbed human remains, before further subsidence could occur, all while navigating the unprecedented challenges of the initial weeks of the COVID-19 shutdown. The methodology developed and utilized in this unique situation would subsequently inform future work at Vicksburg and elsewhere.

Lazrus, Paula (St. John's University)

[46]

Traditional Lifeways as Knowledge of the Past and for the Future

Traditional farming, cooking, and craft production provided a stable and integrated set of taskscapes to citizens of the Boveses for generations. As a result, the conflicts and challenges of living in a region of Italy that has long been neglected or exploited by whatever government was in power, residents see educating their children for professions outside their local environment as imperative and thus often select not to pass on cultural knowledge. Where attempts to conserve and celebrate the region's cultural heritage have been made competing factions and revenge have resulted in the destruction and loss of precious artifacts and papers. Many cultural traditions involve organic materials not preserved in the archaeological record, but which provide windows into activities that stretch throughout the post medieval era. This poster presents some of those activities and posits ways they can teach us about the past and provide insights for the future.

Lazrus, Paula [46] see Chesson, Meredith

Lazrus, Paula [46] see Ullah, Isaac

Leader, George (College of New Jersey) and Olav Bjornerud (Metropolitan Museum of Art)

[123]

Deconstructing Coffin Production: Cuts, Kerfing, and Closures

Excavation of historic burial grounds produce a large number of coffins, but they are often overlooked in favor of hardware and grave goods. Yet coffins were often produced by the same craftspersons producing fine furniture and are often infused with evidence of highly skilled carpentry. Here, we present a detailed analysis of an adult coffin shedding light on the production methods used and stylistic intentions of the craftsperson.

Leader, George [225] see Marks, Theodore

Leathem, Hilary

[160]

(Im)Proper Relations: Heritage Sustainability in Oaxaca

This paper is a call to expand our definitions of sustainability, troubling what has become the bedrock of community archaeology and heritage projects. In Oaxaca, the question of sustainability is pursued alongside a fixed imagining of how an ideal heritage site operates. A “successful heritage project,” institutional actors assert, is not what they term a “ghost building”—a dead and empty space. Yet, the paradox of sustainable practice seems to do exactly this, often turning spaces into sterile museums or frozen repositories designed for touristic consumption. Drawing on ethnographic and archival research conducted in Mitla, Oaxaca, and UNESCO, I think through the ways sustainability discourse is part of a moral project predicated on aligning communal and institutional relations to history. I query what is at stake in the ways heritage governance

currently operates, and explore how the emphasis on such a narrow rendering of what is sustainable and “alive” winds up positioning institutions as those whom regulate the distinction between life and nonlife, and, subsequently, both what proper relationality entails (Povinelli 2017) and what is worth preserving. In so doing, I hope to better sketch out the conceptual architecture of patrimonio and open discussions into its ontological boundaries and cosmological significance.

Leavesley, Matthew [217] see Fairbairn, Andrew

Lebenzon, Roxanne (University of Connecticut), Leore Grosman (Hebrew University of Jerusalem, Israel) and Natalie Munro (University of Connecticut)

[199]

Measurement Variability in a Collection of Modern Gazelle (Gazella gazella) Skeletons and Its Archaeological Implications

Linear skeletal measurements have long been harnessed by zooarchaeologists to differentiate animals by taxon, breed, age, and sex, to investigate domestication and animal management strategies and the impact of factors such as climate change and anthropogenic activity. However, due to equifinality, interpreting archaeological body size data remains challenging. In this study, we investigate the degree and relative impact of different factors such as sex, age, and environmental variables (temperature and precipitation) on mountain gazelle (*Gazella gazella*) morphology. We explore measurement variability in five commonly preserved skeletal elements: the humerus, tibia, scapula, astragalus, and the second phalanx. Our analysis demonstrates that sex is the primary determinant of gazelle body size, and that age has minimal impact once elements have fused. For some elements, size is also impacted by temperature, while for others, the relationship is less clear. This connection may be obscured by human activities that disrupt the scheduling of resources used by gazelles, such as agriculture and landscape modification. Finally, we explore the potential of computerized procedures to improve the accuracy, precision, and repeatability of measurement data and show that 3D measuring protocols produce higher quality data than that obtained by traditional caliper methods.

LeBlanc, Megan (Auburn University, Montgomery)

[281]

The Tacahuay Landscape: Land Use and Environmental Change on the South Coast of Peru

The Tacahuay Quebrada on the far southern coast of Peru was shaped by a combination of human and environmental forces. Within its watershed, there is a system of channels that have provided resources for humans and other living beings throughout its anthropogenic history. Excavations within these channels revealed use of the Tacahuay landscape between 1000 BCE and 500 CE. This period coincides with flood deposits found within the main Tacahuay quebrada. While a permanent settlement was not found during my investigations, material analyzed from Tacahuay revealed that people were taking advantage of the quebrada channels in addition to accessing resources from the nearby coast. Tacahuay presents a case study of a mixed subsistence strategy approach to thriving in an arid desert region prone to natural disasters. These peoples continued a legacy of maritime resource collections and supplemented these resources with the terrestrial resources found on the Tacahuay landscape. Similar to the environment in which they live, the people of Tacahuay were influenced by the intersection of the desert and the sea. This paper unites environmental data, including sediment and pollen records, and material culture, to understand the relationship between populations at Tacahuay and the landscape in which they lived.

LeBlanc, Megan [72] see Bishop, Sarah

Leclerc, Elizabeth (University of Maine)

[1]

Chair

LeCompte, Joyce (Willamette Cultural Resources Associates), Jennie Deo Shaw (Salix Archaeological Services) and Warren King George (Muckleshoot Indian Tribe)
[136]

Where Have All the Red Elderberries Gone? A Collaborative Macrobotanical Analysis of Settler-Colonial Impacts on a Vital Coast Salish First Food

In 2019, Willamette Cultural Resources Associates identified a diffuse and deeply buried archaeological site on the Green River, south of Seattle, Washington, during construction monitoring of a large levee replacement project. The site is in close proximity to *ácabctac*, or “red elderberry place.” Macrobotanical analysis indicates that the site was used for mass processing of red elderberry (*scábt*; *Sambucus racemosa*) prior to intense settler appropriation of the area beginning in the 1850s. Yet by the early 1870s, red elderberry is absent from the vicinity according to General Land Ordinance cadastral surveyor notes. Ethnobotanical and ethnohistoric documentation are clear that settlers were well aware that red elderberry was highly prized by Coast Salish people, although they themselves thought the fruit “insipid.” We offer multiple lines of evidence, including consultation with Tribal knowledge-keepers; review of historic maps and other archival, ethnohistoric, and ethnographic sources; and our macrobotanical analysis to argue that settlers may have intentionally destroyed red elderberry to drive Native peoples away from this vital node in a carefully maintained network of traditional native foods.

LeCount, Lisa [251] see Aimers, Jim

Le Doare, Maureen [242] see Delaere, Christophe

Lee, Cheng-Yi [51] see Lin, Kuei-chen

Lee, Christine (University of Mississippi)
[324]

Where Are the Women Warriors? The Evidence for Gender Equality on the Mongolian Steppe

Women in pastoral nomadic steppe cultures had a higher social status and fluid gender roles than their counterparts in sedentary agricultural regions. Central Asian women (Mongol and Qidan) are historically documented to have made diplomatic, economic, and military decisions in proxy for male relatives. Mortuary evidence for women warriors is inferred from burial status and grave goods dating back to 1000 BC. This study searched for evidence of women warriors using bioarchaeological methods on their own bodies. Fifty-seven burials (36 males, 19 females, 2 adolescents) were analyzed, dating from 700 BC to AD 1100. Potential warriorhood was defined as evidence of prolonged horseback riding, archery, and trauma patterns (interpersonal and warfare). Extensive horseback riding was common for men (92%) and women (89%) through all time periods. Adolescents had musculature diagnostic of horseback riding since childhood. Archery was practiced by men (75%), women (79%), and adolescents (50%) through all time periods. Warfare-related trauma was present but rare (males 17%, females 10%, adolescents 0%). This study shows that a portion of women throughout all time periods performed similar duties to men.

Lee, Craig (Montana State University), Erick Robinson (Native Environment Solutions LLC) and Kathryn Puseman (Paleoscapes Archaeobotanical Services Team)
[219]

Ice Coring Archaeoecological Adventures with Dr. Robert (Bob) Kelly

The release of cultural and biological materials from melting snow and ice is the foundation for the field of ice patch archaeology, a sub-field of cryospheric archaeology—the archaeology of the frozen world. To better understand the nature and potential of the ice patch record in the mid-latitude Rocky Mountains, ice patches in the Greater Yellowstone Area and in Glacier National Park were cored to recover accumulations of

organic materials (lags) that form debris-covered surfaces during melt periods. Radiocarbon dating of the recovered lags demonstrate the presence of thousands of years of preserved material in these locations. This paper shares the methods used to obtain the cores and examines the ages of the lags recovered from three different cores for contemporaneity. The paper also examines the ages of the lags (melt surfaces) relative to the ages of directly dated organic artifacts recovered at ice patches. Indigenous partners participated in the planning and execution of these projects and the species/plant communities identified in the lags were shared with interested Indigenous and scientific communities, e.g., botanists.

Lee, Craig [265] see Neeley, Michael
Lee, Craig [120] see Dixon, E. James

Lee, Samuel [100] see Kucur, Ezra

Lefebvre, Karine [260] see Manin, Aurelie

LeFebvre, Michelle (Florida Museum of Natural History), Isabelle Holland-Lulewicz (Pennsylvania State University), Victor Thompson (University of Georgia), Nicolas Gauthier (Florida Museum of Natural History) and Kristen Grace (Florida Museum of Natural History) [229]

Disaster Survey and Documentation of Southwest Florida Archaeological Site Damage from Hurricane Ian
Accelerating shifts in climate and extreme weather events such as hurricanes threaten archaeological sites, especially in coastal regions which contain some of the most vulnerable forms of cultural heritage. As such, coastal archaeological sites provide exemplary locations for (1) the rapid study of storm impacts to archaeological site stability, preservation, and resilience planning; (2) understanding how site managers balance disaster response with post-storm public education and outreach; and (3) the role of archaeological cultural heritage preservation in community recovery. Here we share the results of a disaster survey of four well-preserved Calusa archaeological cultural heritage sites (e.g., Pineland, Mound Key, Estero Island, and Calusa Island) in southwest Florida following Hurricane Ian (2022). Working directly with site managers and local community members, we documented and assessed damage from high winds, tree falls, and storm surge, as well as post-storm looting. Moreover, we documented heritage stakeholder values regarding the role of each site in supporting recovery and (re)defining community resilience following Hurricane Ian. Our results indicate variable types of damage across different sites, management concerns related to recovery and long-term resilience planning, and great value placed on sites as places for community coalescence and reflection in the wake of disaster.

LeFebvre, Michelle (Florida Museum of Natural History) [280]

Moderator

LeFebvre, Michelle [229] see De La Torre Salas, Natalie
LeFebvre, Michelle [287] see Farace, Anthony
LeFebvre, Michelle [318] see Green, Jennifer
LeFebvre, Michelle [263] see Jorissen, Philippa
LeFebvre, Michelle [259] see Oliveira, Cristina

Lehner, Mark [85]

A Hippo Hip and an Olive Pit

How Richard Redding's identification of a hippopotamus hip bone catalyzed a rethinking of the Heit el-

Ghurab site of Fourth Dynasty (ca. 2500 BCE) settlement at the Giza Pyramids, and how central authorities mobilized and organized labor for building pyramids.

Leight, Megan [147] see Jones, Olivia

Leishman, Kendra (University of British Columbia), Kara Ren (University of British Columbia), Aleksa Alaica (University of British Columbia), Milton Luján Dávila (Independent Scholar) and George Lau (University of East Anglia)

[215]

Material Wealth and Herding Power: A Pastoralist Perspective on Divine Lordship from Pashash, Peru

Fluctuating political allegiances during the Early Intermediate period (200 BCE–600 CE) were coopted by competing leaders throughout the central Peruvian highlands and more broadly in the south-central Andes. The relationships and conflicts that resulted from socioeconomic negotiations among local networks; alongside the vacuum of power left by the collapse of Chavín influence several centuries before, provide an ideal opportunity to examine the way that pastoral practices enabled and inhibited the ascension of divine lords. In this paper, we examine the heterogeneity of camelid (llama and alpaca) herds from the site of Pashash (200–400 CE) to examine how material wealth as expressed in nonhuman capital shifted the balances of power in the region. Mobilizing osteometric datasets from camelid first phalanges and stable isotope results to trace dietary and mobility, our analyses attest that pastoralism holds a key set of practices that were both world-making and world-breaking. The ability to control nonhuman animal power was a cornerstone to defining divine lordship during the Recuay cultural phase of the central Peruvian Andes, and this left lasting consequences for the definition of power for centuries that followed.

Leishman, Kendra [268] see Ren, Kara

Lekson, Stephen (University of Colorado Museum of Natural History)

[52]

A History of the Ancient Southwest Revisited

A History of the Ancient Southwest was published 15 years ago. How would I rewrite it today? After a brief review of that aging narrative, I'll revisit several key points, threads, and themes in light of new information and understandings. I will explore the importance of continental-scale contexts, hinted but not fully developed in the book. And I will assess the place of *History* in current and future Southwest archaeology.

Lelis De Oliveira, Sara (Universidad Nacional Autónoma de México)

[322]

Discussant

Lema, Carolina [77] see Roa Solís, Constanza

Lema, Veronica (CONICET), Javier Echeverría (Universidad de Santiago de Chile), Giuseppe Alva Valverde (Proyecto de Investigación Arqueológica y Conservación Chavín de Huántar), Oscar Arias Espinosa and John Rick (Stanford University)

[27]

Consumo de plantas psicoactivas en Chavín de Huántar: Primeras evidencias directas en tubos de hueso en contexto de la Galería 3

En 2018 el Programa de Investigación Arqueológico y Conservación en Chavín de Huántar excavó la nueva

Galería 3 del Atrio de la Plaza Circular, donde fueron reconocidos cuatro eventos deposicionales que consisten en concentraciones de cerámica, carbón, restos óseos y bienes suntuarios ofrendados antes y durante la clausura del espacio. Además de la cerámica identificada durante las excavaciones de la galería, se pudieron recuperar 22 artefactos óseos tubulares de los cuales 11 se encontraron en un mismo evento deposicional sobre el piso de esta galería. Se seleccionaron los tubos, más una cucharilla y una valva para análisis de contenido usando técnicas arqueobotánicas y químicas. Esto implicó el muestreo de los artefactos en un ambiente controlado, obteniendo muestras de sedimento del interior de los tubos y de las superficies de la cucharilla y valva. También se obtuvieron muestras de sedimento de la galería para control. Las muestras se analizaron mediante microscopía óptica y cromatografía de gases acoplada a espectrometría de masa. Ambos análisis coincidieron en señalar la presencia de residuos y moléculas asociadas a las mismas plantas psicoactivas en un sub grupo de tubos, sugiriendo su posible uso como inhaladores.

Lemaitre, Coline and Claire Alix (University Paris I Panthéon-Sorbonne)

[306]

A Study of the Free-Backing Bow-and-Arrow System's Functions and Social Implications in Western Alaska (AD 600–Nineteenth Century) by the Use of a Morphometrical and Mechanical Methodology

Around AD 600, cultural dynamics and a technology shift emerge among coastal Alaska Neo-Inuit people. Archaeological sites show evidence of the adoption, in a unique and innovative way, of a recurved or reflex bow of highly probable Asian origin, reinforced with twisted sinew cables. Known as the “free-backing bow,” historically this innovation is documented by rich ethnographic collections from the Aleutians to Greenland and within the larger Bering Strait region. Yet many morphological variations regarding the bow's profile, sinew-backing type, arrow morphology, and subsequent functions remain poorly documented. In this paper, we present our analysis of some of the earliest remains of this bow technology from the Birnirk and Kugusugaruk sites near Utqiagvik, northern Alaska, with comparison to ethnographic collections. These bows and arrows are analyzed as intertwining systems looking at both their morphometrical and mechanical features while systematically recording their structural and materials components and conducting simulation of arrow shots using a 3D software. This systematic and system-oriented approach to ancient bow technology can be a valuable cultural marker in our quest to better understand the cultural interactions and means of technology adoption in the Bering Strait at a key moment in the cultural development of the region.

Lemaitre, Serge (Royal Museums of Art and History, Brussels), Caroline Polet (Royal Belgian Institute of Natural Sciences), Caroline Tilleux (University of Louvain, Belgium), Aurore Mathys (Royal Belgian Institute of Natural Sciences) and Pauline Kirgis (University of Bordeaux, France)

[37]

New Research on Andean Mummies at the Royal Museums of Art and History, Brussels, Belgium

The Royal Museums of Art and History preserves seven complete or partial Andean mummies. Three are still surrounded by textiles in the form of funerary bundles. Four others lacked textile remains but were probably also held up by ties and fabric. For the museum and for Belgium, one of them is very important because he was made famous thanks to the depiction by the Tintin illustrator Hergé in two of his comic albums as Rascar Capac (*The 7 Crystal Balls* and *The Temple of the Sun*). Recent advances in medical imaging (CT- and micro-CT scan) permitted us to obtain high-quality imaging and 3D modeling. The research demonstrated that the mummies were the object of specific treatments. We note, in fact, the ablation of viscera but also the presence of postmortem sutures. The insect analysis also gives us an indication of how long this process took.

Lentz, David (University of Cincinnati), Stephanie Meyers (University of Cincinnati), John Jones (Archaeological Consulting Service Ltd., Tempe), Nicholas Dunning (University of Cincinnati) and Kathryn Reese-Taylor (University of Calgary)

[31]

Paleoenvironmental Studies at the Ancient Maya Center of Yaxnohcah based on Analyses of eDNA, Pollen, and Plant Macroremains

Yaxnohcah was a major civic-ceremonial center of the ancient Maya world, especially during the Preclassic period (1000 BCE–200 CE). Environmental data from excavations provided important insights into the interaction between the ancient inhabitants of the polity and the surrounding Neotropical forest, a subject area that previously has been poorly understood. Our research aimed to fill that knowledge void by employing traditional paleoethnobotanical approaches combined with a useful new technology, the analysis of environmental DNA. The results enabled us to characterize the vegetation associated with the principal structures and the artificial reservoirs that provided the city's water supply. Because the area is without access to permanent water sources, such as rivers or lakes, these reservoirs were key to the development and survival of the city. Our findings indicated that although there were large areas cleared for agricultural purposes, large patches of mature upland and bajo forest remained intact throughout the Maya occupation. In addition, our studies revealed that there were incursions of pine savanna into the area that may have been a reflection of prevailing edaphic conditions, or alternatively, the result of frequent burning.

Lentz, David [128] see Arroyo, Barbara

Lentz, David [31] see Anaya Hernández, Armando

Lentz, David [31] see Meyers, Stephanie

León, Claudia [75] see Martínez-Tagüena, Natalia

Leonardt, Sabrina [77] see Belardi, Juan

Leone, Karen

[24]

Macrobotanical Evidence from Poverty Point

While it was initially assumed that the residents of Poverty Point relied on an agricultural subsistence base, it soon became apparent that there was no macrobotanical evidence supporting such an assumption. Instead, subsistence remains were found to be generally consistent with a Late Archaic hunting, fishing, and gathering economy. Macrobotanical remains recovered from multiple Poverty Point testing and excavation projects, and analyzed between 2014 and 2022, have yielded a wealth of information about the subsistence activities of Poverty Point's Late Archaic inhabitants. The diversity of plant taxa represented in the assemblages adds nuance to traditional paradigms of Late Archaic foodways in the region.

Lepic, Adisa [247] see Boric, Dusan

le Roux, Petrus [236] see Sealy, Judith

Leroy, Stépanie [289] see Hendrickson, Mitch

Leslie, David (Heritage Consultants LLC; TerraSearch Geophysical LLC), Andy Fallon (University of Connecticut), Zachary Singer (Maryland Historical Trust) and John Pfeiffer (Town of East Lyme)

[92]

What Lies Beneath: Underwater Ground-Penetrating Radar Survey of the Inundated Liebman Site, an Early Paleoindian Site in Lebanon, Connecticut.

The Liebman Site (71-31) is an Early Paleoindian site preserved beneath Lake Williams, a ~270-acre lake initially created by nineteenth-century milling operations of Bartlett Brook in Lebanon, Connecticut. Originally discovered by John Parkos and excavated by John Pfeiffer in the 1990s when water levels were reduced, the site is generally inaccessible to traditional investigations. These excavations yielded 85 artifacts including 15 tools, comprising end scrapers, pièce esquillées, utilized flakes, and a fluted point base. The fluted point base is consistent with a Crowfield point type, indicative of an Early Paleoindian occupation of the site. To better contextualize the stratigraphy and environmental setting of the site, we surveyed the general site area via ground-penetrating radar (GPR) using a real-time kinematic (RTK) GPS encoded 350 MHz antenna and SIR-4000 with the antenna situated on a raft and surveyor on a paddleboard. Data were collected in transects perpendicular to relevant landforms, which revealed the presence of a stable floodplain and buried paleo-channel, as well as the nineteenth-century channel of Bartlett Brook. Our survey demonstrates the utility of underwater GPR survey, which provides a cost-effective method for assessing site stratigraphy of inundated archaeological sites in freshwater environments.

Leslie, David [224] see Pisanelli, Brenna

Leslie, David [224] see Scialo, Stephanie

Leslie, David [183] see Seminario, Linda

Leslie, David [311] see Sportman, Sarah

Lessa, Andrea [259] see Gilson, Simon-Pierre

Letelier Cosmelli, Javiera (Centro de Investigación de Ecosistemas de la Patagonia [CIEP])

[77]

Chair

Letelier Cosmelli, Javiera (Centro de Investigación de Ecosistemas de la Patagonia [CIEP])

[77]

Exploring Psychiatry's History in Chile: A Material Perspective of the Dr. José Horwitz Barak Psychiatric Institute

This research aims to carry out an archaeological analysis of the current Dr. José Horwitz Barak Psychiatric Institute in Santiago de Chile, a place historically considered a total institution. Since its creation in 1858, this hospital has served as the main psychiatric center in Chile. The present investigation explores the historical use of space within the institute through the architectural record that includes historical buildings up to contemporary material evidence. The research delves into the material changes and continuities that have occurred over time. The study contributes to a broader understanding of the sociopolitical aspects and material implications of the history of psychiatry and of patients with psychiatric disorders, which have historically been neglected in Chile.

Letelier Cosmelli, Javiera [77] see Nuevo Delaunay, Amalia

Leventhal, Richard (University of Pennsylvania)

[124]

Reframing Heritage: Indigenous Views in the Forefront

In many parts of the world, it is assumed that the most important heritage are the ancient sites that are visible on the landscape. This is certainly true within the Maya region of Central America. Projects often start

out with the assumption that contemporary Maya communities are focused on local archaeological sites as primary heritage sites. Led by this assumption, archaeology projects become so-called community archaeology projects when Maya community members are hired to work together with the archaeologists. Archaeological sites might be important heritage sites to archaeologists, governments, and UNESCO—but are not necessarily of great importance to local communities. Real community heritage projects must start with a series of wide-ranging conversations about local areas and sites of cultural importance. Such conversations will help identify community heritage and the local histories and stories about that location. In addition, these conversations will also define the type of information and knowledge desired by local community members. These discussions provide a local framework for what is heritage, how to examine and work to define local heritage, and be considered a real community project. These concepts will be presented along with information from ongoing projects in both Mexico and Belize.

Levin, Maureece (University of Arkansas, Little Rock), Aimee Miles (Uppsala University, Campus Gotland), Emily Hillyard (University of Arkansas, Little Rock) and Skyler Davis (University of Arkansas, Little Rock)

[179]

On Taro, Tridacna, and Turtles: Using a Multiproxy Method to Explore Food, Fishing, and Agriculture on Pingelap, a Micronesian Atoll

Pingelap Atoll, located in Pohnpei State, Federated States of Micronesia, has been home to humans for approximately 1,700 years. At 1.8 km² and 70 km from its nearest island neighbor, food procurement has traditionally relied on marine fishing and hunting as well as intensive management of the coral island landscape, centered on the cultivation of giant swamp taro (*Cyrtosperma merkusii*). In this paper, we explore patterns in Pingelapese food systems over the span of occupation, drawing on archaeobotanical (macroremain and phytolith) and zooarchaeological data (including land snails) from a large midden near the village, as well as interviews with modern farmers and fishers. We find evidence for notable shifts in marine food consumption as well as landscape improvements leading to the development of productive soils in this coralline environment. Modern practices still rely heavily on traditional land and sea foods, although environmental and economic patterns have led to significant dietary shifts.

Levine, Marc (University of Oklahoma)

[210]

The House of the Blademaker: Recent Excavations in the Urban Core of Late Postclassic Tututepec (Yucu Dzaa), Oaxaca

This paper presents the preliminary results of recent household excavations at the Late Postclassic (AD 1100–1522) capital of Tututepec (Yucu Dzaa), located on the Pacific coast of Oaxaca, Mexico. These excavations, carried out in 2022, are the first to target a residential area within the ancient capital's urban core. Among the most significant findings so far is compelling evidence for household production of obsidian blades. Furthermore, preliminary analysis indicates that the obsidian was imported in the form of well-prepared cores, with over 90% sourced from either Pachuca or Pico de Orizaba. The blademaker who lived at this household appears to have produced blades to exchange directly with other citizens or via Tututepec's central marketplace. This paper will also compare residential data from the "house of the blademaker" with that of households excavated previously in a neighborhood on the northeastern outskirts of Tututepec.

Lev-Tov, Justin (Goodwin & Associates) and Kevin McGeough (University of Lethbridge, Canada)

[85]

The Animal Provisioning System for a Late Bronze Age Temple at Hazor, Israel

The tel site of Hazor, Israel, is one of the largest such occupational mounds in the southern Levant. Excavated in the 1950s, 1960s, and continuously since the 1990s, archaeologists have uncovered monumental public buildings. One such building, now identified as one of several Late Bronze Age temples, contains

evidence of divination and animal sacrifice and/or feasts. So documented, the question remains: how was this temple provisioned with animals to supply sacrifices, feasts, and the meals of temple workers? Did this societal segment have direct access to animal herds of its own? Were they tithed from the city's population or purchased from nomadic pastoralists? To arrive at a possible explanation, I study zooarchaeological evidence in the form of sheep, goat, and cattle relative abundance, metric measurements, and kill-off profiles. I also draw on cuneiform tablets that record herd management practices at other cities. The questions posed, and approach taken, draw direct and indirect inspiration from Richard Redding's work on feeding pyramid builders in Egypt, as well as Melinda Zeder's more general efforts to untangle ancient food supply chains in ancient Iran.

Levy, Jay, James Quinn (Mohegan Tribe), David McCormick Alcorta (Mohegan Tribe), Dylan Russell (Mohegan Tribe) and Craig Cipolla (Tufts University)

[99]

Collaborative Indigenous Archaeology at Mohegan

This poster showcases collaborative archaeological approaches to research and teaching on the Mohegan Reservation in southeastern Connecticut. It describes the Mohegan Archaeology Project, a long-running collaboration that records and studies the textures of eighteenth- and nineteenth-century reservation life. The project has two main forms, an archaeological field school and a tribal archaeology workshop. These two forms of collaborative research and teaching act together to (1) shed new light on an understudied and poorly documented era of Mohegan history, (2) bear witness to the material realities of settler colonialism, and (3) “remake” the discipline. It accomplishes the third goal by opening new interpretive spaces—including voices and forms of knowledge that have been traditionally overlooked and even disregarded in the discipline—in which to train the next generation of archaeologists.

Levy, Jay [258] see Cipolla, Craig

Lewis, Abigail (Northern Arizona University) and Jaime Awe (Northern Arizona University, Belize Valley Archaeo)

[99]

Monkey Business: Examining the Significance of Monkey Imagery in Maya Caves and Ideology

Monkeys are prominently featured in Maya creation narratives, in Maya art, and more rarely in burial contexts. Despite their apparent importance in Maya ideology, however, previous research on monkeys in the Maya world has primarily focused on their primatological, and linguistic significance. In contrast to those studies, this research investigates the archaeological significance of monkey imagery in Maya caves and ideology by examining monkey representations in cave art, on cultural remains in caves, in Maya hieroglyphs, and their depictions in Maya iconography in general. By conducting qualitative ethnographic research with participants at revitalized traditional deer and monkey dances, this research also explores data on the physical representation of monkeys as characters and figures in a postcolonial context. With reference to creation narratives and collected archaeological data associated with the depositional, chronological, and iconographical evidence of monkeys in art and burial contexts, this study also bridges the gap between archaeological and modern interpretations of the significance of monkeys in Maya cosmology and religion.

Lewis, Annabelle (University of Colorado, Boulder)

[43]

Supplying Life and Death: General Goods Stores in Nineteenth-Century Upstate New York

In the nineteenth century, residents of the Towns of Cazenovia, Fenner, and Nelson, NY were able to purchase a variety of necessary goods at general stores. These establishments provided items from furniture, to mourning wear, to ceramics, to coffins, and many things in between. Today, the idea of buying dinner plates alongside grave goods seems almost unbelievable: this poster explores the overlap in consumer spaces between the realms of the living and dead in nineteenth-century New York state. Through archival and

geospatial analysis, I examine the situation of general goods stores on the landscape, the kinds of advertisements they circulated, and the larger role these venues played in social and economic networks of the region. Understanding the role of general goods stores in this context draws connections between two often-separated aspects of historical archaeology: dead spaces and living ones. By studying these stores in their composite, taking the ceramics alongside the coffins, we gain a more complete picture of life in nineteenth-century rural America and the constraints, needs, and values that made such sites necessary for people in the past.

Lewis, Barnaby [88] see Garraty, Christopher

Lewis, Barnaby [88] see Loendorf, Chris

Lewis, Brandon (Santa Monica College), Rui Mataloto (Municipality of Redondo, Portugal), Ana Margarida Moco and Margarida Figueiredo [170]

Nossa Senhora do Freixo, Portugal: A Late Antiquity Roman Basilica and the Continued Reuse of Sacred Space Excavations at the Late Antiquity Roman Basilica of Nossa Senhora do Freixo, Portugal, provide insight into the surprising significance of this hinterland community within the southern Iberian Peninsula. Recent excavations have revealed architectural components and compositional trappings associated with a center of regional affluence. Imported utilitarian items and associated wealth goods suggest critical involvement within the overarching sociopolitical and ideological landscape of the Roman Empire. Germane to our interest in the organization and maintenance of Christianity throughout the Iberian Peninsula is the symbolic and ideological reuse of sacred space. Detailed investigation of the Freixo Basilica and especially the eastern transept has provided uncommon insight into the continued practice of Christianity following the collapse of the Roman Empire. Carbon-14 analyses firmly associate Christian inhumations with periods of Germanic and Visigoth occupation.

Lewis, Cheyenne (Chronicle Heritage), Kevin Gidusko (Chronicle Heritage) and Tommy Budd (Chronicle Heritage) [329]

Lens into History: Burial Recovery at Vicksburg National Cemetery

Following a landslide at Vicksburg National Cemetery in 2020, a portion of the collapsed terrace within the cemetery was subject to emergency excavations to recover burials that had fallen from the Section T terrace. In addition, the landslide covered a portion of the Section J terrace. These impacted areas contain burials of some of the first United States Colored Troops (USCT) who were part of the Vicksburg Campaign. Additional mitigative measures were determined necessary to exhume burials on the intact but endangered Section T terrace as well as those covered by the landslide on the Section J terrace. Manual and mechanical excavation techniques were implemented during the recovery process, but exhumations along the scarp face required more unique and situationally appropriate methodologies. Additional and ongoing erosion necessitated the re-excavation of units dug in 2020 during the initial recovery efforts and the attempted reassociation of more recently recovered human remains to the previously exposed burials. Results of this project have implications for the interpretation of burials of “unknown” individuals and the narrative of the USCT experience, both at Vicksburg National Cemetery and within the broader National Cemetery System.

Lewis, David (Oregon State University) [87]

Draining Wetlands in the Willamette Valley

In this paper, I present case studies in reconstructing traditional Indigenous landscapes of the Willamette Valley, involving the removal of Indigenous stewardship, imposing settler agriculture, and draining wetlands in the valley. The environmental reconstruction of settler changes made to these land and water systems

provides information about what Traditional landscapes were like for the Kalapuya and Molalla peoples previous to treaties and reservations, and how their culture was adapted to these landscapes.

Lewis, David [133] see Coughlan, Michael

Lewis, Dylan
[99]

Food for Thought, Smoke for Diplomacy

Food surrounds politics, economics, ideology, and cosmology. Food experiences go beyond the dishes. The scale of consumption varies from small daily meals to large ritual feasts. Intoxicants are used in conjunction with eating events. These substances are often paired with foods to enhance the eating experience and are used symbolically during special occasions. Tobacco was integral to all precontact people's lives in Eastern North America. Use of tobacco during eating events varied based on site and setting. Tobacco served as a medium for political and social negotiations. Exchanges of tobacco often initiated discourse. This poster will explore the relationship between food and tobacco within the Algonquin-speaking Lenape, ranging from common to special use, by evaluating ethnohistorical records and analysis of smoking pipes.

Lewis, Jeffrey
[66]

Discussant

Lewis, Jeffrey and Regan Crider
[266]

Intensive Regionalism among Hunter-Gatherer Groups in Eastern Oklahoma

Across the southeastern United States, the Woodland period is marked as a time by processes of increased cultural distinction known as regionalism. In Eastern Oklahoma, the Fourche Maline archaeological culture (ca. 2300–1100 cal BP) demonstrates a strategy of limited mobility and high intensities of regionalism prior to the Woodland period. These cultural attributes are examined through the analysis of the lithic assemblage from the Troy Adams (34LF33) site. The results of this analysis are compared to lithic assemblages from several other midden mound sites that indicate regionalist practices through time among Fourche Maline people.

Lewis, Krista [45] see King, Kathryn

Lewis, Larea
[136]

Applying Indigenous Methodologies to Create an Indigenous Research Agenda Model

Indigenous methodologies are methods of research that are guided by Indigenous knowledge systems and worldviews. Indigenous methodologies include (1) doing research for, by or with indigenous communities, (2) incorporating indigenous worldviews, (3) incorporating traditional knowledge, (4) incorporating tribal ethics and protocols, (5) applying decolonizing aims, and (6) securing cultural information. Applying these methods to our research, the research process and the writings produced from them can change the course in how we present knowledge and educate the world. Using these methods will help us, as researchers, to understand how research directly impacts culture as well as tribal sovereignty. A research agenda model promotes tribal sovereignty by having researchers engage with the community, develop relations, and seek permission and approval of their projects from tribal committees and/or leadership officials. In this paper, we explore Indigenous research methods as well as observe how the Agua Caliente Band of Cahuilla Indian tribe came together to help create a research agenda model that can be used in further research studies on their culture.

Lewis, Mary [246] see Nowell, April

Lewis, Michael (Confederated Tribes of Grand Ronde), Jeremy Johnson (Confederated Tribes of Grand Ronde), Dianna Wilson (Portland State University), Shelby Anderson (Portland State University) and Briece Edwards (Confederated Tribes of Grand Ronde)

[262]

Burning the Record in Order to Save It: Cultural Fire as Archaeological Survey Method

Global heating is increasing the size and frequency of catastrophic wildfires in the American West, with the 2020 wildfires burning nearly 2% of the area of Oregon. In the year following, hundreds of new archaeological sites within the Ceded Lands of the Confederated Tribes of Grand Ronde (CTGR) were recorded. Despite decades of archaeological surveys of these areas, relatively few sites per acre were identified before the 2020 fires, in contrast to the site densities identified post-fire in smaller survey areas. This apparent difference in site visibility in pre- and post-fire landscapes has implications for the CTGR's cultural resource responsibilities when implementing cultural burning and during consultation with federal and state agencies. This study was designed to characterize how fire application changes the visibility of archaeological sites during pedestrian survey by quantifying the detection rate of 250 identical small (<3 cm) objects distributed over 80 acres in pre- and post-burn settings. Key successes and challenges in collaboration between tribal, federal, state, and academic participants are reflected on and implications for future archaeological investigations and landscape level analysis and management are discussed.

Lewis, Michael [133] see Edwards, Briece

Lewis-Schroer, Keely (Forest Service, Francis Marion and Sumter NF) and Amanda Rasmussen (Forest Service, Francis Marion and Sumter NF)

[44]

Rediscovering the Revolutionary War on the Francis Marion and Sumter National Forests

The Francis Marion and Sumter National Forests in South Carolina include over 11,000 archaeological sites spanning major events throughout history. The Revolutionary War is no exception but represents an understudied portion of the forests' history despite its namesakes. As part of the forests' efforts to further site stewardship and a better understanding of the Southern Campaign of the American Revolution, a metal detection survey will take place on the Francis Marion Ranger District in the winter of 2023 to identify and delineate Revolutionary War period sites. Results of this investigation will be used to develop future management strategies and protection measures for these sites. These results will be detailed and presented as part of a pilot study for additional investigations across the Forest in anticipation of the 250th anniversary of the Revolutionary War.

Li, Feng (Columbia University)

[146]

Discussant

Li, Kuang-Ti [86] see Wang, Kuan-Wen

Li, Liu [51] see Tang, Yiyi

Li, Min (UCLA)

[155]

Cheng and the Question of Large Walled Settlements in Neolithic China

Large Neolithic settlements (approximately 1–4 km² in size) surrounded by rammed earth walls or moat enclosures are frequently referred to as *cheng* (often translated as “the walled city”) in Chinese archaeology and analyzed as proto-urban centers through Childe’s notion of urban revolution. As an emic concept in classical Chinese, however, the notion of *cheng* highlights the wall enclosure as a defense mechanism around the settlement without necessarily imply the presence of urban life within it. Instead of evoking an imagined vision of urbanization to fill in the social space within these wall enclosures, this paper presents a comparative study of the great Yangshao, Liangzhu, Qujialing-Shijiahe, and Longshan sites to understand the organizational plurality and diversity of the large walled settlements in Neolithic China. I will explore the different dynamics of large population aggregation, the significant variation in their population density, and the diverse social mechanism responsible for the constitution and maintenance of these settlements. Besides alternative control strategies and centralized political authority, I will focus on pilgrimage and other ritual activities potentially responsible for the emergence of these monumental sites.

Li, Qi (University of Chicago)

[19]

Dinning at the Colonial Frontier: The Maintenance of Erligang Foodways at Panlongcheng

Located in the middle Yangtze region, the Panlongcheng site represents the southernmost extent of the Erligang civilization’s expansion during early Bronze Age China. While much scholarly work has concentrated on elucidating the site’s significance and its implications for understanding the unique cultural expansion in ancient China, there has been limited exploration into the daily lives of the Erligang settlers in this region. This study presents archaeobotanical evidence collected during the 2019–2020 and 2021–2022 field seasons at Panlongcheng. Although the identification and quantification of archaeobotanical remains are ongoing, preliminary findings indicate that the Erligang settlers retained their traditional northern foodways—specifically, millet—in an area known for originating rice agriculture. This practice is particularly noteworthy given the local geographical conditions, which make millet production seemingly unfeasible. Our research thus suggests that the settlers may have acquired millet through long-term trade or exchange networks, reinforcing their Erligang identity and maintaining consistent interactions with their northern counterparts.

Lickers Xavier, Adrienne [87] see Prado, Shalen

Lieb, Brad [279] see Krus, Anthony

Liedl, Hannah [241] see Hannigan, Elizabeth

Liedl, Hannah [241] see Rothwell, Jessica

Lien, Lauren (Lancaster Museum of Art and History)

[237]

A Comprehensive Analysis of Faunal Remains from Lovejoy Springs (CA-LAN-192)

Located in the western Mojave Desert community of Lake Los Angeles, Lovejoy Springs (CA-LAN-192) is a large village site with extensive occupation beginning as early as 4000 BP. Four cultural components have been identified at the site—Pinto, Gypsum, Rose Spring, and Late Prehistoric. This presentation utilizes a faunal assemblage excavated by Cerro Coso College in 1989. The collection sat unassuming in museum collections for decades prior to this project. Due to the state of the assemblage, which is heavily fragmented and fire-affected, identification posed a challenge. Despite this, numerous taxa were identified, including a variety of birds, mammals, reptiles, and rodents. The presence of cut marks and modified bone offers further insight into butchery practices and use of local fauna at the site. Variations in fauna were noted between levels, suggesting the influence of several factors such as changes in site occupation and environmental shifts

over time. Due to the lack of faunal analysis data available in this region, this project provides valuable insights to our understanding of Lovejoy Springs and the region's ecological and cultural history.

Liendo, Rodrigo

[78]

Discussant

Lierenz, Julie (Ohio State University), Robert Cook (Ohio State University), Aaron Comstock (University of Louisville), Arvind Nair (Ohio State University) and Sara Polk (Indiana University-Purdue University, Indianapolis)

[101]

Whole Pots and Harvard Drops: Understanding the Pottery from Turpin

Many early professional archaeological investigations in the Ohio River Valley resulted in legacy collections lacking in a variety of ways. The Turpin site, excavated by Harvard University in the late nineteenth century, is an early Fort Ancient village located along the Little Miami River near the confluence with the Ohio River. This site is important because it represents one of the very earliest Fort Ancient occupations in the region. Today it is the locus of our ongoing project striving to work to provide data to better utilize such poor collections. Here we focus on one material class in the assemblage—pottery—through the lenses of both intrasite variation and differences between previous and current excavation practices at the site. We do so by focusing on differences in temper types, surface treatments, neck and rim decorations, and vessel morphology from the site within the context of how excavation strategies have shifted from the nineteenth-century practices to the methods currently being used in our ongoing excavations at the site.

Lieurance, Alysha [69] see Mendenhall, Phillip

Ligorred Perramon, José De Calasanz

[218]

Prospección arqueológica en la Ciudad de Mérida, Yucatán: Consecuencias y oportunidades de la colaboración entre el Laboratorio de Prospección Arqueológica, el Municipio de Mérida y la Universidad Autónoma de Yucatán

En nuestra ponencia presentaremos el fruto de años de relación entre el Laboratorio fundado por el doctor Luis Barba, que fue nuestro profesor en los años ochenta cursando la licenciatura en Arqueología en la ENAH de la Ciudad de México. Desde entonces, nos asomamos como arqueólogos al patrimonio invisible y/o abandonado mediante las técnicas de la prospección geofísica y el estudio de la topografía antigua. Uno de los antecedentes importantes que condujo a la formulación de la propuesta que describiremos más adelante, fue la firma, en 2016 del convenio de colaboración entre el IIA-UNAM y la FAUADY, para contribuir a la construcción de bases de datos del patrimonio arqueológico; compartir información geográfica y productos del trabajo conjunto, útiles para el desarrollo de proyectos de conservación del patrimonio arquitectónico en contextos urbanos y, realizar la prospección arqueológica en escenarios reales de la ciudad de Mérida. Ahora participamos en el Proyecto de investigación El Patrimonio Cultural-Natural en las Políticas y Gestión del Desarrollo Urbano-Territorial en Ciudades Mexicanas del Siglo XXI con el objetivo de estudiar la relación del patrimonio en contextos urbanos y su estructuración y operación en el territorio y dar cuenta de su historia y sus relaciones.

Lillios, Katina (University of Iowa)

[298]

Unfreezing Archaeological Palimpsests: A View from the Iberian Peninsula during the Third and Second Millennia BCE
The Dawn of Everything is a deep well of insights, provocations, and information about the human condition and the human capacity for creativity, particularly with respect to social organization and inequality. The

fundamental question the authors ask is “how did we get stuck?” Answering that question requires archaeologists to engage with the implications of the palimpsestic nature of the archaeological record and with site microhistories. My paper approaches these issues from the perspective of the Iberian Peninsula between 3000 and 1500 BCE—during the periods known as the Copper Age and Early Bronze Age.

Lim, Jonathan (Center for Advanced Spatial Technologies, University of Arkansas), Sean Gleason (Nalaquq) and Lynn Church (Nalaquq)

[150]

Nalaquq / “It is found”: Collaborative Heritage Landscape Survey and Spatial Technology with Alaska Native Communities

In the face of a rapidly changing climate, Alaska Native Yup'ik (pl. Yupiit) communities on the Bering Sea are increasingly empowered and motivated to protect their landscape heritage—facilitated in part by collaborative projects with outside institutions like the Quinhagak Archaeological Project (2009–present). In this paper we show how high density survey and measurement (HDSM) technologies, when used in conjunction with Yup'ik partners and their traditional wisdom, can be effectively deployed to manage and monitor at-risk cultural landscapes. HDSM techniques and ethnographic approaches generate dearth of spatial data that can be used to manage threats to infrastructure, heritage, and subsistence activity areas. Many years of collaborating in this manner has culminated in the formation of Nalaquq LLC, an Alaska Native community-owned CRM firm based in Quinhagak, which seeks to carry out landscape heritage research in the region and foster a new generation of Yupiit trained in geospatial techniques.

Lima, Helena [61] see Moraes, Bruno

Limberg, Caitlin [43] see Uldall, Tamara

Lin, Kuei-chen (Institute of History and Philology, Academia Sinica), Cheng-Yi Lee (Exploration & Development Research Institute, CPC), Yu Itahashi (University of Tsukuba), Zhiqing Zhou (Chengdu Institute of Cultural Relics and Archaeology) and Minoru Yoneda (University Museum, University of Tokyo)

[51]

The Dietary Practices of the Ancient Inhabitants of the Chengdu Plain

The extent to which aquatic resources influenced the dietary patterns of the Chengdu Plain's inhabitants is poorly understood, despite the region's intricate network of river channels. This research examines the nitrogen isotope makeup of specific amino acids in collagen derived from human bone samples collected from three sites in Sichuan. The objective of this study is to gain insight into the subsistence practices on the Chengdu Plain, spanning from the late Neolithic to the middle Bronze Age. This period is notable for the introduction and growing significance of agriculture and animal domestication in the region. The nitrogen isotope ratios of phenylalanine ($\delta^{15}\text{N}$ Phe) and glutamic acid ($\delta^{15}\text{N}$ Glu) suggest that the individuals residing on the Chengdu Plain predominantly relied on terrestrial foods. The dietary reliance on aquatic resources was found to be restricted. One potential rationale for the limited reliance on water resources could be attributed to the advancement of agriculture and the domestication of animals, which provided an ample supply of food. This study additionally evaluates the importance of these subsistence economies in the social development of the Chengdu Plain.

Lin, Kuei-chen [315] see Wang, Li-Ying

Lin, Xin and Guopeng Chen (University of Oxford)**[21]***Demand or Control? Reconsidering the Production and Consumption of Maya Jade*

The procurement and consumption of jade are conventionally thought to have been under the control of Maya elites. Through cross-cultural comparison with ancient China as a representative jade-using culture, we argue that the multidimensional circulation of Maya jade created more flexible and complex social relations than “elite control.” In the Classic Maya, the production, distribution, and consumption of jade artifacts among different centers, as well as the quality, quantity, and extent of labor invested in jade craftsmanship, are not in alignment with the political hierarchy of each center. The tradition of using jade in caches and burials also exhibits distinct tendencies. Small jade beads functioned as commodities in circulation.

Commoners were extensively involved in jade production, even in the procedures that required complex craftsmanship. Once items of ideological and symbolic significance, like jade, possess economic value, they could introduce greater flexibility and dynamism in social mobility across different strata. In this case, “elite control” might not be the most effective analytical concept to understand jade utilization among different social actors of Classic Maya. We conclude by highlighting the concept of demand and reciprocity to interpret various forms of collective actions and cooperation in jade production and consumption.

Lincoln, Amber [8] see Gusick, Amy

Lincoln, Hollie**[5]***Chert Tools from the Ta’ab Nuk Na Salt Works*

Assessment of a lithic assemblage excavated from the coastal Maya site of Ta’ab Nuk Na in southern Belize provides insight on economic and domestic activities. A reliance on imported chert tools from the north helps visualize links in the extensive coastal trade system operating during the Late Classic period. Chert tool forms and associated use-wear indicates the types of everyday activities taking place within the Paynes Creek Salt Works communities and highlights the importance of imported stone for task completion and in relation to large-scale salt production and export.

Lindler, Joseph (South Carolina Institute of Archaeology & Anthropology), Savannah Bornheim (South Carolina Institute of Archaeology & Anthropology), Jordan Jeffreys (South Carolina Institute of Archaeology & Anthropology), Greta Napatnik (South Carolina Institute of Archaeology & Anthropology) and Nina Schreiner (South Carolina Institute of Archaeology & Anthropology)**[72]***NAGPRA Training for the Next Generation of Archaeologists: The Keowee-Toxaway Re-curation Project*

Thirty years beyond enactment of the Native American Graves Protection and Repatriation Act (NAGPRA), there is still much to be done. The growing curation crisis and renewed efforts by Tribal Nations and archaeologists at the South Carolina Institute of Archaeology & Anthropology (SCIAA) created a training opportunity for undergraduate and graduate students pursuing careers in archaeology at the University of South Carolina (USC). By revisiting collections excavated during the Keowee-Toxaway Reservoir Survey (1967–1969), students learn to navigate the complex processes of the NAGPRA statute, curation practices for legacy collections, and identification of archaeological materials for federal documentation. Matching students’ unique skills with appropriate portions of projects is crucial training the next generation of archaeologists in NAGPRA protocols while respecting the sensitivity of potentially eligible collections. This poster reports preliminary results of the Keowee-Toxaway Re-curation Project including quantitative assessment of collections management progress and qualitative assessment of student learning outcomes.

Lindley, Tiffany (The Alamo, ATI) and Pamela Jary Rosser (The Alamo, ATI)**[192]***Preservation of Cultural Heritage at the Alamo: A Collaboration between Archaeology and Conservation*

Archaeology and conservation might appear to be contradictory disciplines. Archaeological methods are inherently destructive, and conservation strives to prevent loss. However, at some historic sites archaeology and conservation collaborate as integral partners to preserve the physical structures and cultural heritage, as well as recovering new data through archaeological investigations. This is true at the historic Alamo in San Antonio, Texas, which began as a Spanish mission in the eighteenth century and served many purposes over the past 300 years. Over the years, the original mission structures and venues intimately tied to Texas history have experienced extreme weathering and deterioration. Additionally, the surrounding urban landscape has grown around, and over, the historic footprint. This unique situation creates opportunities for archaeological investigations to support conservation work at the site. As the conservation team designs solutions to preserve the historic structures of the site, they must collaborate with archaeologists in order to protect buried cultural resources. Projects begin with archaeology in a supporting role but quickly morph into the recovery of critical archaeological data. This paper will discuss how recent investigations at the Alamo demonstrate the necessary and impactful collaboration of archaeology and conservation, with a shared goal of cultural preservation.

Lindquist, Shayna (University of Kentucky)**[163]***Shifting Patterns of Obsidian Procurement within a Distant Consumer Region*

By the Formative period, prehispanic societies in southern Veracruz primarily relied on obsidian for numerous daily activities. However, as the geological sources of obsidian that were exploited occur in central Mexico and the Guatemalan and Honduran highlands, southern Veracruz represents a distant consumer macroregion of obsidian. The Eastern Lower Papaloapan Basin (ELPB) exists within this macroregion, located to the west of the base of the Tuxtla Mountains. Local communities within the ELPB necessarily forged interregional relationships that can be found underpinning the long-distance exchange networks facilitating the movement of obsidian raw material. In this paper, I endeavor to identify these dynamic exchange networks present in the ELPB during the Formative and Classic periods through a diachronic analysis of shifting obsidian procurement patterns. This transitional period also represents a time of sociopolitical and economic change at the local scale, as well as regional and macroregional scales; thus, the patterns of obsidian procurement must further be situated within these broader contexts. To facilitate this discussion, I draw on data generated from portable X-ray fluorescence (pXRF) and technological analyses of 5,022 samples of obsidian collected during a regional archaeological survey that targeted the ELPB.

Lindsay, Ian (Purdue University), Khachatur Meliksetian (Armenian National Academy of Sciences), Hripsime Gevorgyan (Mining Academy of Freiberg), Laure Dussubieux (Field Museum of Natural History) and Erik Otárola-Castillo (Purdue University)**[50]***Investigating Geological Sources and Sociotechnical Dimensions of Mica Pottery Inclusions from Late Bronze Age (LBA, 1500–1100 BC) Fortresses in Northern Armenia*

For 25 years, the Archaeology and Geography of Ancient Transcaucasian Societies project (Project ArAGATS) has focused on the origins, regional-scale organization, and sociopolitical dynamics among LBA hillforts in northern Armenia. This paper presents preliminary results from a pilot study of mica samples based on petrographic and elemental analyses undertaken by Project ArAGATS, Armenia's Institute of Geological Sciences, and the EAF. The goals of research were to (1) establish the viability of LA-ICP-MS as a technique for identifying the source of mica pottery inclusions, and (2) study the sociotechnical context of mica's circulation and incorporation into LBA ceramics. A prior ceramic circulation study in Armenia's Tsaghkahovit Plain based on INAA revealed that the small LBA fortress of Gegharot, host to a suite of several religious shrines, benefited from asymmetrical flows of pottery (and other goods) from surrounding sites. This center of ritual practice also sits on a natural source of mica, whose signature sparkling flakes, our

data suggest, were transported and added to ceramics 12 km across the plain. We present LA-ICP-MS and optical petrography results from regional mica sources linked to different metamorphic and magmatic rocks and explore the sociotechnical implications of mica inclusions as materialization of ritual practice.

Lingle, Ashley [141] see Seifert, Jerrod

Linn, Jessica

[70]

Shapes of Power: Rectangular Tombs and Societal Identities at Yaracachi Cemetery, Moquegua, Peru

Humans have a variety of means of coping with the inevitability of death that is expressed in material culture. To interpret burials as the material remains of ritualistic processes, multiple variables need to be assessed, such as the construction, location, spatial distribution of graves, and associated grave goods. Two types of tombs were uncovered at the Yaracachi cemetery in Moquegua, Peru; round tombs and rectangular tombs. Rectangular tombs were atypical in the Andes during the Late Intermediate period (1100–1400 CE). For this project, I plotted graves based on shape and elaboration to discern spatial patterns and assessed the types and numbers of associated cultural materials to consider ethnic affiliations and social status. I analyzed grave data from approximately 22% of the 1,300+ tombs. Rectangular-shaped graves account for 10% of the graves examined and have a higher average number of grave goods and metal artifacts than round tombs, which suggests that these graves display a higher socioeconomic status of the interred individuals. Rectangular graves occur in clusters, which may indicate an association between these individuals, perhaps based on social status or ethnicity. The rarity of rectangular graves at Yaracachi and throughout the Andes suggests that these are high-status graves.

Linn, Sarah [6] see Smit, Douglas

Lipo, Carl [24] see Gilleland, Sarah

Lippert, Dorothy (National Museum of Natural History)

[100]

Respecting the Sacred Power of Indigenous Collections and Museum Staff

Indigenous cultural protocols impact consultation with museums in numerous ways. Tribal perspectives on feminine power that is most evident during menstruation can challenge non-Native ways of working with museum collections. This poster will discuss ways in which museum staff negotiate unfamiliar cultural practices during tribal consultation. Respect for tribal belonging in museum collections can lead to respect for museum staff as well.

Lippert, Dorothy (National Museum of Natural History)

[182]

Discussant

Lippi, Ronald (University of Wisconsin)

[220]

A Biography of the Yumbos

The Yumbos, Barbacoan peoples of the western flank of the Andes in northern Ecuador's Pichincha province, have been the principal object of my studies for the past four decades. I draw on archaeological research by myself and my team (especially including Alejandra Gudiño), as well as ethnohistoric, linguistic, genetic, and other studies by a variety of scholars to present conclusions—firm as well as tentative—on Yumbo origins,

migrations, technology, population, and sociopolitical complexity. Also discussed briefly are migrations of other Barbaocoan groups in southern Colombia and Ecuador as well as surviving indigenous peoples with Yumbo heritage.

Lira, Nicolas (Universidad de Chile), Paulina Acuña (Independent Researcher), Miguel Caceres (Natural History Museum Rio Seco), Aymara Zegers (Natural History Museum Rio Seco) and Sebastian Carrillo (Universidad de Chile)

[158]

La explotación industrial de cetáceos en Bahía Aguila, Estrecho de Magallanes

El presente trabajo informa las actividades de campo realizadas en el marco del proyecto FIC 5377 de 2018/2019, y las metodologías utilizadas para el registro y recolección de restos óseos de cetáceos sumergidos en bahía Águila (estrecho de Magallanes, Chile) donde funcionó la planta de la Sociedad Ballenera de Magallanes entre los años 1905-1916. En dichas actividades se desecharon las carcasas de los cetáceos sobre la bahía, depositándose en el fondo marino inmediato miles de huesos, testigos del primer experimento de caza y procesamiento de ballenas a la usanza moderna en Chile. Utilizando diferentes análisis se espera obtener información sobre el impacto de la caza de ballenas en las poblaciones del estrecho de Magallanes, como a su vez dar cuenta de la memoria histórica de la actividad ballenera en este sector. Así también, comparar estos resultados con los de las poblaciones actuales, para estimar si los animales faenados en Bahía Águila están emparentados con los grupos que con cada vez mayor frecuencia son avistados en los distintos puntos del corredor Atlántico Pacífico y sus intrincados canales.

Lira-Lopez, Yamile

[216]

El Juego de Pelota del valle de Maltrata y su contexto cultural

El juego de pelota es un tema que ha llamado la atención a numerosos investigadores, algunos se han centrado en el estudio arquitectónico, otros desarrollan enfoques iconográficos o propuestas de rituales basados en evidencias como en el Tajín. En otros lugares, solo se distinguen las estructuras paralelas que definen al juego y no siempre es posible excavarlos o estudiarlos más detalladamente para sustentar la propuesta que estuvieron relacionados con prácticas o rituales. Este es el caso del valle de Maltrata, localizado en la región montañosa al oeste del centro del estado de Veracruz, en el asentamiento denominado Rincón de Aquila. Aquí se han encontrado dos estructuras paralelas definidas como Juego de pelota. En una temporada de campo se excavaron cuatro pozos con la finalidad de identificar algún alineamiento o evidencia cultural que pudiera indicarnos alguna actividad relacionada con rituales u otra función, además de poder precisar su temporalidad. En esta ponencia se presentan los datos del trabajo de campo así como el análisis de los materiales culturales que se encontraron, para poder inferir temporalidad y posible uso, y en el mejor de los casos poder identificar algún tipo de ritual.

Lira-Noriega, Andrés [217] see Chiou, Katherine

Litavec, Helen (Binghamton University)

[211]

An Examination of Commingled Atlantoaxial Joints by Deviation Analysis

This study builds on previous research that incorporated deviation analyses into sorting commingled human remains. This presentation will analyze a relatively untested joint surface, the atlantoaxial joint, to exclude potential commingled joint pairs. Virtual models were created at the University of Tennessee-Knoxville Donated Skeletal Collection from 68 atlases and 69 axes using an EinScan-Pro 2x + Handheld Surface Scanner. The shape of the articular surfaces was analyzed in Geomagic Wrap 2017, and the congruency of the two facets was measured with a deviation analysis. ROC curves were performed on a reference sample composed of 200 commingled and non-commingled joint pairs to identify threshold values that could help

separate commingled remains. A validation sample of 225 pairs was subsequently examined to demonstrate the efficacy of this method on a sample of unknown individuals. Statistical analyses demonstrated that the deviation analysis values from commingled joints were significantly larger than those from non-commingled individuals ($p < 0.0001$). Based on the selected threshold values, 66%–71% of atlantoaxial joint pairs were correctly excluded. This objective technique improves on previously subjective strategies for rejecting commingled atlantoaxial joints and can assist bioarchaeologists in the interpretation of commingled assemblages.

Little, Aimée (YEAR Centre, University of York), Andy Needham (YEAR Centre, University of York), Gareth Perry (YEAR Centre, University of York), Jessica Bates (YEAR Centre, University of York) and Andrew Langley (YEAR Centre, University of York)

[257]

The YEAR Centre: A Research-Driven Pedagogical Approach to Experimental Archaeology

In recent years, since the development of our outdoor experimental archaeology “lab” (York Experimental Archaeological Research “YEAR” Centre, University of York) we have designed a series of modules that place experiential learning at the center of pedagogical practice. Such is the success of these modules we now have a dedicated master’s program on Experimental Archaeology and Material Culture. The pedagogical pathway commences with an UG module interweaving theory and practice, focused on experiential learning, facilitating practical engagement with diverse archaeological materials. By UG year two, students undertake a practical skills module, enabling them to build firsthand experience with a range of analytical methods, linked to different archaeological materials, while learning to execute and report on their own research projects, working in a group. The journey continues with our postgraduate courses where the focus shifts, with students achieving intellectual independence through practice-based research related to real research questions involving report writing, with the results sometimes published. These modules constitute a learning framework that support students to develop the skills to design their own experiments, select the appropriate methodological tools to analyze the data, and feel confident in integrating theoretical approaches to fully interpret and write up the data generated.

Liu, Jiun-Yu (Burke Museum) and Yi-Chang Liu (National Chen Kung University)

[86]

A Trading Post or Craftspeople’s Village? A Ceramic Perspective of the Blihun Hanben Site in Eastern Taiwan

The Blihun Hanben (BHB) site in ancient Taiwan, dated between 2,000 and 1,200 years ago, contained a wide range of remains that indicate an iron crafting settlement. The excavation yielded over 9,000 kg of ceramics from two cultural layers, indicating a prolonged period of human occupation. This study employed technical typology, geophysical, and geochemical analyses to examine the ceramic assemblage. These analyses unveiled 16 subtypes in seven groups within the upper layer ceramics and 17 subtypes in seven groups within the lower layer ceramics. The specimens were discovered to have originated from four different areas, namely BHB local, northern Taiwan, Ilan Plain, and eastern Taiwan. The quantity and multiple sources of ceramics suggest that the BHB people had continuous and frequent interactions with communities from other regions. Notably, frequent long-distance and intensive interactions were relatively rare in Taiwan’s archaeological cases, particularly when nonlocal production represented most of the BHB lower-layer ceramics.

Liu, Li [51] see Cui, Yinzhi

Liu, Ruiliang

[19]

Metallurgy in the Arc: Technological Choice and Resource Management Strategy during the Late Shang Period

The concept of the Arc, proposed in 1980s by Tong Enzheng and further developed by J. Rawson in the last 10 years, refers to the vast landscape stretching from northeast to southwest China. Its unique geography

incorporates both pastoralism and agriculture, vital to the communication between the Eurasian Steppe to the Central Plains of China in Neolithic and Bronze Age. In this paper, we have recharacterized the key metal assemblages in the Arc (e.g., Sanxingdui, Hanzhong, Northern Shaanxi) and compared them with those of Anyang. It reveals that the northern part of the Arc shows a rather different metallurgical tradition, with greater emphasis on mixing and recycling, whereas the Yellow and Yangtze groups appear to be more centralized, with an abundant supply of raw metal and well-selected alloying technologies for different social hierarchies.

Liu, Xinyi (Washington University, St. Louis)

[215]

Modes of Labor Organization and Variations of Pastoral Economies across East Asia during the Second Millennium BCE

There has been considerable recent momentum in documenting pastoral communities in the past who engaged with multi-resource subsistence strategies, including both husbandry and cultivation. This paper explores the potential conceptual conflict between cultivation and pastoral activities in the context of labor budget and surplus accumulation. Pastoral economies often employ extensive labor approaches in which productivity is driven by the size of herds and the quality and expansiveness of pastures. Traditional farming systems, on the other hand, are often limited by land availability, and consequently, productivity is driven by intensive labor input per area unit. I shall use three case studies from Southern Tibet, Eastern Tianshan, and Inner Mongolia, respectively, to illustrate varying labor organizations underlying subsistence choices during the second millennium BCE. These case studies inform about the flexibility and ingenuity of ancient pastoral communities who practiced more than one subsistence mode and combined them in a number of innovative hybrids that coexisted over thousands of years.

Liu, Xinyi [223] see Diaz, Lucia

Liu, Xinyi [201] see Haileselassie Assefa, Sewasew

Liu, Xinyi [179] see Sun, Yufeng

Liu, Yi-Chang [51] see Chen, Yi-lin

Liu, Yi-Chang [86] see Liu, Jiun-Yu

Livesay, Ali (Los Alamos National Laboratory)

[269]

If Walls Could Whisper: Tales from a Talus Room

Despite its remoteness and the restricted access, there are very few standing structures on the Pajarito Plateau where Los Alamos National Laboratory now resides. One notable exception is Nake'muu Pueblo which was first built during the Coalition period (AD 1225–1300). Pueblo de San Ildefonso oral history describes that Nake'muu was reoccupied following the events around the Pueblo Revolt and the Reconquest in the 1680s–1690s. Very little is known about Tewa descendants reoccupying other ancestral places during this early historic period. In this poster I examine LA 136699, an Ancestral Pueblo period cave with standing talus room masonry architecture that was presumably rebuilt sometime post-1600. Photos show walls at least 1.5 m tall with intact roof timbers. Who rebuilt and occupied the structure? Examination of associated diagnostic artifacts should elucidate when the ancestral site was reoccupied and by whom. If the outcome of this investigation suggests Tewa descendants reoccupied the site, it would add considerably to our understanding of the use of the Pajarito Plateau post-1600; when Ancestral Pueblo peoples relocated their year-round villages closer to the Rio Grande but never abandoned the Plateau.

Livingood, Patrick (University of Oklahoma)**[154]***Lessons Learned from Simulating Precolumbian Canoe Travel in Eastern North America*

David Hurst Thomas (1972) described how model building and simulation can lead to serendipitous discoveries, that is findings that were not originally intended. In several projects to simulate cost distance of canoe travel in eastern North America, most of the memorable and impactful lessons have been a result of serendipity. This paper will share some of those the insights about canoes, canoe travel, and transportation of goods that have come from this simulation work.

Livingood, Patrick [279] see Regnier, Amanda

Livingston, Catherine [44] see Jones, Eric

Ljung, Emma [98] see Chai Andrade, Travis

Llobera, Marcos**[28]***Chair***Llobera, Marcos****[28]***The World around Us: Challenges in the Analysis of 3D Scenes*

This presentation focuses on an ongoing project aimed at the development of a new set of methods (in the way of a python package) that will enable the analysis of 3D Scenes. This open-source package will provide the tools to be able to render and combine digital terrain models (DTM) with 3D objects generated through photogrammetry or terrain scanners. More importantly, it will enable the possibility of deriving numerical information from the rendered scenes which can then be further processed to describe qualities and analyze landscape scenes in novel ways.

Llobera, Marcos [28] see Saintenoy, Thibault

Lloyd, Lara (Logan Simpson)**[45]***Chair***Lloyd, Lara (Logan Simpson)****[45]**

From Concept to Interpretation: Trail Design and Signage Collaboration among CRM, Volunteers, and a City Preserve

Interpretation, an educational method for inspiring interest in a topic by connecting individuals with cultural and natural resources through experiences and illustrative media, is not commonly associated with cultural resources management (CRM). In the 2010s, a local CRM firm provided management recommendations and options for a city-owned preserve in Arizona, which resulted in the collaboration between the firm and volunteers for a Class II survey within a historic cattle ranch on the preserve. The current project is a follow-up to the work in the 2010s and includes the creation of an interpretive trail with associated signage, a National Register of Historic Places (NRHP) nomination, a trifold brochure for the trail, and archaeological monitoring during ground-disturbance activities within the historic ranch. This paper presents the challenges and successes for collaborating with volunteers and city's parks and recreation department to create and design an interpretive trail and signage within a historic site in the post-pandemic era.

LoBiondo, Matthew (UC Santa Barbara) and Emily Kracht (UC Santa Barbara)**[50]***Tracking Population Movement and Interaction in Southern Appalachia: Elemental Analysis of Early Mississippian Pottery from Etowah*

Migration, pilgrimage, and other forms of movement and culture contact have long been recognized as important forces of social change. Social interaction among culturally diverse groups has been demonstrated archaeologically as an important causal factor in Mississippian origins throughout the US Southeast and Midwest. Archaeologists have argued that interregional interactions during the eleventh and twelfth centuries CE established important relationships among Native American groups from Southern Appalachia. These far-flung connections are poorly understood but were instrumental in the spread of Mississippian practices and beliefs, eventually leading to the development of hierarchical regional polities such as Etowah in northwestern Georgia. Recent analyses support a scenario in which both local and nonlocal groups were synchronically present at Etowah, with profound changes on sociopolitical relationships across Southern Appalachia. However, it remains unclear if disparate populations permanently or periodically occupied the site. New elemental compositional analysis of Etowah pottery indicates that pottery was made both locally and nonlocally, suggesting that a portion of the population involved in the establishment of Etowah were periodically visiting the site to engage in ceremonial activities.

Locker, Angelina (Vanderbilt University), Diane Chase (University of Houston), Arlen Chase (University of Houston), Tiffany Tung (Vanderbilt University) and Rick Smith (George Mason University)**[34]**

The Maya are a People of Movement: An Isotopic Assessment at Chactemal (Santa Rita Corozal), Northern Belize
 Located in Corozal District in northern Belize, the coastal Maya archaeological site of Santa Rita Corozal, hereafter Chactemal, was continuously occupied from the Middle Preclassic (BCE 800–300) through the Late Postclassic (CE 1250–1532). While many sites in the Southern Lowlands experienced decline and abandonment in the Terminal Classic (CE 800–900), Chactemal flourished, reaching its apex in the Late Postclassic when it took on a position of regional power. It is not well-understood how mobility influenced this population growth. We measured stable oxygen isotopes of dental enamel ($n = 108$ samples) and bone carbonate ($n = 96$ samples) from 100 Ancestors recovered from Chactemal to diachronically assess movement. Approval for isotopic research was granted by the Belize Institute of Archaeology. Additionally, we co-developed this work alongside local Maya organizations and villages in Corozal District. $\delta^{18}\text{O}$ values (mean = -4.0 ‰ VPDB, SD = 1.4, range = -7.6 ‰ to -0.8 ‰ VPDB) indicate nonlocal Ancestors are present within the burial population and suggest nonlocal Ancestors from the Preclassic came from different places than those in the Late Postclassic. Chactemal's geographic positioning on the coast, between two rivers, and within the border zone between the Northern and Southern Lowlands attracted people from other places throughout time.

Locker, Angelina [34] see Smith, Rick

Lockett-Harris, Joshua**[78]***Chair***Lockett-Harris, Joshua, Kathryn Reese-Taylor (University of Calgary), Felix Kupprat (Universidad Nacional Autónoma de México), Armando Anaya Hernández (Universidad Autónoma de Campeche) and Debra Walker (University of Florida)****[78]**

Continuities and Transformations: A Sociopolitical History of the Central E-Group of Yaxnohcah, Campeche, Mexico
 Archaeological investigations at the ancient Maya site of Yaxnohcah, located in the Bajo el Laberinto region of the Maya lowlands, have demonstrated that the construction, maintenance, and elaboration of its central E-

Group-style plaza-pyramid complex was integral to the multimillennial development of sociopolitical complexity and urbanism at this site. Often centrally located, E-Groups were generationally altered to meet the demands of increasingly complex lowland societies. Through this process they came to embody specific generational realities and sociopolitical necessities, often reflecting larger contemporary sociocultural trends. Our research indicates that the form, alignment and possibly the function of the Yaxnohcah E-Group changed substantially through time, exemplifying the dynamic agency of the peoples of Yaxnohcah and the flexible evolution of the mental and material schemata of lowland E-Groups. This paper synthesizes two-millennia-plus (800 BCE–1250 CE) of excavation data from the central E-Group of the ancient Maya site of Yaxnohcah to identify important moments of material and sociopolitical transformation. We then analyze this sociopolitical history in relation to larger contemporaneous sociopolitical dynamics in this important region, specifically in relation to the prominent neighboring site of Calakmul.

Lockett-Harris, Joshuah [78] see Kupprat, Felix

Lockhart, Jami (Arkansas Archeological Survey) and Carl Drexler (Arkansas Archeological Survey)

[177]

Landscape-Scale GIS and Multisensor Geophysics for Interpretation of the Civil War Battle at Pea Ridge, Arkansas

This presentation highlights GIS and remote sensing components of a four-year project completed by the Arkansas Archeological Survey as part of a Cooperative Ecosystem Studies Units (CESU) program with Pea Ridge National Military Park and the National Park Service's Midwest Archeological Center. The research was conducted to expand and detail interpretations of a major trans-Mississippi Civil War battle fought March 7 and 8, 1862. Hundreds of battle-related artifacts and multiple contemporaneous cultural features were discovered, excavated, catalogued, mapped, analyzed, and interpreted using a landscape-scale, GIS-informed methodology.

Lockhart, Jami [177] see Drexler, Carl

Lodge, Spencer (US Fish and Wildlife Service)

[294]

Experimental Earth Oven Agave Bakes with the Southern Paiute in Nevada

Beginning in 2018, I have been working with the Southern Paiute to host annual agave bakes using experimental earth ovens at the Desert National Wildlife Refuge in southern Nevada. Our events have gradually grown as we experiment with various aspects of earth oven cooking, including the use and quantity of different fuel types, introduction of modern materials, and processing methods. Once a commonly used technology as evidenced by hundreds of earth ovens documented throughout the refuge, access to traditional baking areas were restricted to Indigenous peoples following decades of emigration and the establishment of federal lands. As a result, the ability to practice traditional lifeways, such as baking agave in earth ovens, was irrevocably changed. We hope that as interest continues to grow, this event may be expanded to include the participation of additional southern Paiute bands, as well as opening the event up to the public to share this traditional cooking method.

Loeffelman, Tessi [334] see Veselka, Barbara

Loendorf, Chris (Gila River Indian Community)

[88]

Chair

Loendorf, Chris (Gila River Indian Community), Barnaby Lewis (Gila River Indian Community Tribal Historic Preser) and Glen Rice (Arizona State University)

[88]

Vapaki: Akimel O'odham Cultural Knowledge Regarding Classic Period Platform Mound Villages in the Phoenix Basin
Vapaki is plural in the O'odham language for Vah'ki, which is the name used to refer to what archaeologists now call Classic period (ca. 1250–1450) platform mound villages. Importantly, Vah'ki is specifically applied only to platform mound sites, and the term is not used to refer to any other older villages such as Snaketown. Because O'odham traditions regarding the Vah'ki are of great importance, they have been carefully passed down, and this knowledge has therefore been preserved. This history individually describes platform mounds, and each Vah'ki has a unique name. The leaders who ruled each mound are also still known by name, and events that occurred at the sites are still remembered. Furthermore, the O'odham history says that Elder Brother, their primary deity, defeated the Vapaki rulers one after the other. Unfortunately, some archaeologists have misinterpreted this to mean that the O'odham are a different ethnic group than the people who lived at the mounds, but the traditions are that the mound builders are direct ancestors who were also O'odham. Indeed, the creation narrative begins long before the Vapaki were destroyed, and it is impossible that the prior events describe the lives of a different people.

Loendorf, Chris [88] see Medchill, Brian

Loendorf, Chris [88] see Morgan, Linda

Loendorf, Lawrence (Sacred Sites Research Inc.)

[156]

New Developments with the Shield-Bearing Warrior Motif in the Rocky Mountains

The shield-bearing warrior, a widely recognized rock art motif on the Northwestern Plains, has a more complex pedigree than archaeologists originally recognized. Examples in north-central Montana are radiocarbon dated to the Late Archaic while other sites in southwestern Montana may date to the same time. Adding to the complexity, a possible Fremont connection has been made to shield-bearing warrior pictographs in southern Montana. The research points to long-standing intergroup warfare in the region.

Lofaro, Ellen (University of Tennessee), Meghan Buchanan (Auburn University), RaeLynn Butler (Muscogee Nation), Amanda Roberts Thompson (University of Georgia) and Nina Schreiner (University of South Carolina)

[72]

Updates from the Southeastern NAGPRA Community of Practice (SNACP): Successes and Challenges

Over 33 years have passed since the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) was ratified. As practitioners, we recognize the progress that has been made and acknowledge the vast amount of repatriation work that still must occur. The Southeastern NAGPRA Community of Practice (SNACP) group was created in 2020 as a means of enabling NAGPRA practitioners to connect and have conversations that focus on common issues, practical advice, potential solutions, and the everyday realities of implementing NAGPRA with a particular emphasis on the southeastern United States. This poster will share resources and ways to connect further and will discuss efforts regarding split and shared collections as well as how increased communication, collaboration, and partnerships are key to successful repatriations.

Lofaro, Ellen (University of Tennessee)

[97]

Discussant

Logan, Amanda (Northwestern University)

[250]

Chair

Logan, Amanda (Northwestern University)**[250]***From Making to Mobilizing History in Banda: Learning from Ann Stahl's Place-Based Approach to Archaeology*

Ann Stahl's career spans over 40 years, and for most of that time, she has focused on working in one small place in central Ghana known as Banda. Banda is different than most regions where archaeologists usually conduct sustained, long-term fieldwork: it was not a large, well-known urban site or the center of a large polity, but a place that has long been a peripheral frontier. In this paper, I reflect on how this context and Ann's commitment to place-based work has anchored her trajectory as a scholar and a mentor. Revisiting this place-based work showcases how engaged, community-based archaeology can be enacted across a wide range of contexts, but also how community work acts to change the questions of archaeology as a discipline. I also detail how many of her scholarly habits (interdisciplinarity, theoretical agility, empiricism, and openness to learning) provide a set of aspirational practices for archaeologists today.

Lo Giudice, Alessandro [12] see Sorrentino, Giusi

LoGiurato, Olivia [140] see Breslawski, Ryan

Logvin, Andrei [23] see Berner, Jack

Lohse, Jon (Terracon Consultants Inc.)**[9]***Chair***Lohse, Jon (Terracon Consultants Inc.), Mike McBride (Gault School for Archaeological Research), Sébastien Perrot-Minnot, Sergio Ayala (Gault School for Archaeological Research) and Victoria Pagano (Terracon Consultants Inc.)****[9]***An Overview of Paleoindian and Archaic Finds from August Pine Ridge, Belize, Central America*

Recent findings have come to light from previously reported but poorly known preceramic deposits from near the village of August Pine Ridge, Belize, Central America. Years of sand quarrying have led to the recovery of hundreds of artifacts representing the entire known preceramic sequence from Central America. Present are fluted bifaces as well as manufacturing failures representing South American stemmed Fishtail points, so-called waisted styles representing local traditions, and North American-influenced Clovis types. Newly defined Late Paleoindian styles represent continued connections from South America to Central Mexico and document shrinking cultural interaction spheres following the disappearance of fluted biface horizons after around 12,000 years ago. An array of stone bowls, mortars, and pestles likely documents the emergence of plant-focused subsistence practices. An industry based on macroblades and flakes characterizes Archaic occupations from perhaps around 5,500 years ago until the emergence of Maya villages, ca. 3000 BP. The presence of a few constricted adzes represents the final millennia of Archaic technology, until the increasing reliance on maize cultivation led inhabitants to relocate from the sandy pine ridge to more productive soils. This presentation places into hemispheric and regional context one of the most important preceramic sites in Central America.

Loiselle, Hope**[51]***Multiproxy Analysis of Sea Lion Hunting in the Northwestern Pacific*

Around the Pacific Rim sea lions have served as a valuable food source for coastal communities throughout the Holocene and as a globally valued product in the expanding Eurasian and American colonial and imperial

trade networks of the past few centuries. In this talk I discuss the hunting of both Japanese and Steller sea lions in the northwestern Pacific. The Japanese sea lion is an extinct pinniped while the Steller sea lion is an extant but threatened species in the region. To better understand human relationships with these species through time and what factors led to their current population statuses, I use a combination of ancient DNA, stable isotope, and archaeological datasets. Japanese sea lions from 11 archaeological sites around Hokkaido dating from the Early Jomon through the Okhotsk period were sampled. Steller sea lions from the Kuril Islands were sampled and include individuals dating to the Epi-Jomon, Okhotsk, 1800s, and modern period. Both sea lion species appear to have been resilient to millennia of hunting and climatic change up until the 1900s.

Loiselle, Hope [87] see Jacobs, Nicholas

Lombao, Diego, Juan Morales (Institut Català de Paleoecologia Humana i Evolució), Andreu Ollé (Institut Català de Paleoecologia Humana i Evolució) and Marina Mosquera (Universitat Rovira i Virgili)

[162]

Diachronic Evolution of Raw Material Management and Technological Innovations along the Gran Dolina TD10 Sequence (Burgos, Spain)

During the second half of Middle Pleistocene in Europe significant changes occurred, including the emergence of Neanderthal anatomical features and behavioral shifts documented in the archaeological record, such as fire use, Levallois technology, and development of complex hunting strategies. These changes could reflect distinct economic and technological organization. However, prior studies have not quantified the diachronic evolution in raw material management through reduction intensity. This paper investigates core reduction intensity in the Gran Dolina (Spain) TD10 unit, covering a time span from approximately 450 to 220 ka. Results reveal distinct patterns of reduction intensity in which the oldest subunits (TD10.4–TD10.3) show a prevailing trend of low reduction, while the youngest TD10.2 and TD10.1 exhibit increased core reduction intensity. These changes in reduction intensity correspond to several technological shifts. TD10.4 and TD10.3, associated with the Acheulean, emphasize optimizing knapping sequences through specific blank morphologies, while TD10.2 and TD10.1 are considered transitional between Acheulean and Mousterian technocomplexes, showcasing greater core exhaustion, multipolar knapping strategies, and the use of small flakes to produce retouched tools, suggesting more intense management of lithological resources. The study's combination of technological analysis with quantitative reduction studies demonstrates its potential in understanding the dynamics of raw materials management.

Loncar, Stephanie [246] see Halcrow, Sian

Long, Holly (Michigan State University) and Jose Pena (Chronicle Heritage)

[70]

Preliminary Study of Funerary Patterns at the site of CuzCuz, Huarmey Valley, Peru

The archaeological study of funerary practices provides important data concerning cultural traditions, belief systems, social inequalities, and sociopolitical alignment. The excavations conducted at a prehispanic cemetery at the site of CuzCuz highlights funerary practices used by coastal Andean groups during the Late Intermediate period (LIP; AD 1000–1400). In the Huarmey Valley, this cultural period—associated with the production of a local pottery style—emerged following the collapse of the Wari State. While most evidence recovered from CuzCuz is associated with the LIP occupation, there is a Middle Horizon occupation interpreted from polychrome ceramic fragments, textiles, and other recovered artifacts. The study of funerary patterns and changes in material culture at CuzCuz offers the opportunity to observe and understand the social transition from the Middle Horizon to the Late Intermediate period in the Huarmey Valley.

Long, Kali (Barnard College, Columbia University)**[268]***Faunal Chronicles: Unearthing Cultural Significance in San Antonio del Embudo's Eighteenth- to Nineteenth-Century Animal Remains*

In this poster, I report on the faunal remains recovered from eighteenth- and nineteenth-century midden deposits in San Antonio del Embudo, a small settler village in northern New Mexico. I analyze species choices, skeletal element distribution, age profiles, and processing marks (cut, burn, fragment) along with disposal patterns. These remains unveil the story of rural settler families navigating violent uncertainties, transcending mere sustenance to reveal the pastoral traditions and foodways of these resilient families. Amid relentless precarity, their cultural identities are etched onto these bones.

Long, Nick**[33]***Nat 20: Looking at Gaming Pieces and Gambling from the Haynie Site*

For the summer of 2023, I traveled to Cortez, Colorado, to participate in a lab internship at Crow Canyon Archaeological Center. I was given the opportunity to conduct a personal project dealing with a set type of artifacts of my own choosing. For my project, I decided to look at the gaming pieces from the Haynie site (5MT1905). My goal for this project was to contribute a better understanding of gaming and gambling related to the Ancestral Pueblo people for the Crow Canyon Archaeological Center, which could potentially help to better recognize these types of artifacts in future projects and analyses for Crow Canyon. In addition to research dealing with gaming and gambling in the Southwest region and analyzing the gaming pieces that were already identified in the collection, I was able to identify four additional gaming pieces that were previously categorized under different artifact types. This paper that I am presenting discusses the process and the results of this personal project.

Longo, Elena [12] see Cagnato, Clarissa

Longo, Laura (Ca' Foscari University of Venice)**[12]***Chair***Longo, Laura (Ca' Foscari University of Venice), Clarissa Cagnato (Ca' Foscari University of Venice), Elena Badetti (Ca' Foscari University of Venice), Giusi Sorrentino (University of Turin) and Antonio Marcomini (Ca' Foscari University of Venice)****[12]***GSTs and Foodscapes: Unfolding Homo sapiens' Diet When Venturing the Eurasian Steppe*

The surfaces of lithic artifacts, namely of ground stone tools (GSTs), are a rich repository of structured use-related biogenic residues (SU-RBR) such as starch, revealing the mechanical processing of starch-rich organs, naturally biodegradable and therefore vulnerable. The recovery of SU-RBR on the surfaces of GSTs from a consistent number of MIS 3 sites across the Eurasian steppe reveals the emergence of the transformation of dietary carbohydrates that might have served as staple food by *Homo sapiens* (Hs). Examples from key sites will be discussed to support the reasoning on the complex interplay between biology, environment and technological strategies that brought the successful peopling of the Eurasian steppe. Hence, by approaching stone tools as bioarchives, it is possible to document perishable technologies highly informative of the foodscape(s) of early waves of *Homo sapiens* (Hs) when colonizing the Northern latitudes.

Longo, Laura [12] see Cagnato, Clarissa

Longo, Laura [12] see Sorrentino, Giusi

Longstaffe, Matthew (University of Calgary)

[78]

*Chair***Longstaffe, Matthew (University of Calgary), Kyle Farquharson (University of Calgary), Kathryn Reese-Taylor (University of Calgary), Felix Kupprat (Universidad Autónoma de México) and Armando Anaya Hernández (Universidad Autónoma de Campeche)**

[78]

Classic Period Integration at Yaxnohcah: A “Bottom-Up” Perspective from Ximbal Che

Recent investigations at the Ximbal Che group at Yaxnohcah have documented intriguing new data with implications for understanding sociopolitical and economic integration in the Bajo el Laberinto region. These data include diverse cultural assemblages that show radical changes to the built environment of Ximbal Che, ritual activities associated with this construction program, and pronounced shifts in inhabitants' wealth, status, and economic practices. We directly link these patterns to broader sociopolitical transformations following the arrival of the Kanu'l kings at Calakmul in the seventh century CE. This paper argues that these material outcomes reflect the integration of the Ximbal Che Maya into the Kanu'l political and socioeconomic apparatus as intermediate elites who oversaw Yaxnohcah's Sakjol neighborhood marketplace. This was not, however, a unilateral process of subordination. Instead, our findings suggest this was a historically contingent and multifaceted process involving a complex and dynamic interplay between top-down forces and bottom-up strategies, including negotiation, cooperation, and, at times, resistance. The implications of this dataset are discussed, with emphasis on what it tells us about integrative processes in the Bajo el Laberinto region.

Look, Cory [135] see Brown, Matthew

Loomis, Sarah (Harvard University)

[34]

*Chair***Loomis, Sarah (Harvard University)**

[34]

Ways of Death at Los Guachimontones

Los Guachimontones was the largest site of the Teuchitlan tradition that flourished during the Late Formative and Classic periods (ca. 300 BCE–500 CE) in Western Mexico. The site exemplified the monumental architecture of the region—circular pyramid complexes and ballcourts. Human burials have been excavated among these structures and at burial grounds used continuously throughout the site's occupation. The burials and their human remains were examined through a bioarchaeological and mortuary archaeology lens to determine their age, sex, health, and manner of death and burial. The human burials demonstrate the variety of mortuary practices within this society, representing both ceremonial practices associated with the symbolic power of the monuments and the quotidian lives of the general population of the site. Funerary and burial practices, particularly those associated with monumental architecture, legitimated power structures at the site through the command of spiritual forces, labor, violence, and public space. This presentation will include images and a discussion of human skeletal remains.

Looper, Matthew [323] see Munson, Jessica

Lopez, Adolfo (Guahayona Institute) and Daniel Shelley (Guahayona Institute)

[127]

Las poblaciones arcaicas del Cabo Samaná, República Dominicana

El Monumento Natural Cabo Samaná, situado en la provincia de Samaná, en la República Dominicana, atesora

una serie de importantes sitios arqueológicos de época arcaica en las cuevas y abrigos que jalonan el farallón rocoso. El equipo de arqueólogos de Guahayona Institute ha realizado cinco campañas de excavaciones arqueológicas en el área protegida citada. Durante los trabajos de excavación arqueológica se ha localizado un cementerio con los restos de al menos 26 individuos fechados hace alrededor de 5.500 años. También se han hallado restos de ocupación en la Cueva Funeraria de Daniel que ofrecen fechas anteriores al 9000 BP. Uno de los hallazgos más interesantes realizados es la planta de una vivienda, fechada hacia mediados del cuarto milenio antes de Cristo en el denominado Abrigo de Dana. Asociados a ella, aparecieron varios pisos de uso y algunos fogones. En los sitios arqueológicos excavados, se ha constatado la presencia de una industria lítica fabricada con mármol y caliza, que incluye proyectiles, y asociados a esta se han extraído abundantes restos óseos de animales utilizados como fuente de alimentación, entre los que destacan perezosos (*Parocnus*), varias especies de roedores extintos, huesos y espinas de pescados y abundante malacofauna terrestre y marina.

Cabo Samaná Natural Monument, located in the Dominican Republic's Samaná Province, contains a number of important archaeological sites from the Lithic/Archaic period in the caves and rockshelters that dot its cliffside. The Guahayona Institute team of archaeologists has carried out five archaeological excavation campaigns in this protected area. Among their principal findings, located in the Abrigo de Daniel, is a ceremonial burial site with the remains of at least 26 individuals, some dated as far as 5,500 years ago. Remains of occupation were also found in the Cueva Funeraria de Daniel, including a burial dated more than 4,000 years ago, and some dates before 9000 BP that we believe may be anthropic, under current study. One of the most interesting findings, located in the Abrigo de Dana, is the floor plan of a house, marked by postholes, dated toward the mid-fourth millennium BC, with several use-floors and some hearths associated with it. The excavated sites revealed a lithic industry made of marble and limestone, including projectile points, and abundant faunal remains of animals used as food sources, including fish, much terrestrial and marine malacofauna, several species of extinct rodents, three species of extinct ground sloths, and a primate.

Lopez, Dayanira (University of Nevada, Las Vegas) and Lisa Johnson (University of Nevada, Las Vegas)

[69]

What Lies Beneath: The Significance of a Midden Burial in Exploring Differential Mortuary Treatment of the Maya at Palenque

The PREP: Urban Life at Palenque Project 2023 field season brought about unexpected findings regarding household mortuary practices. Two atypical burials were uncovered: (1) an isolated, articulated right arm boxed-in by large stones at the entrance of residential structure J37, and (2) a complete primary burial discovered on the south side of the same structure. During the excavation, it was evident that the individual found to the south presented with typical cultural skeletal modifications and was in the typical burial position for this site. Importantly, however, this burial was found within a midden feature and is one of only three similar burials from this site. This midden burial presents a unique instance of deviation from commonly known mortuary practices of the Maya of Palenque: the individual was interred directly in the soil, with material artifacts, but no stones deliberately placed on top or around them, such as was the case with the isolated arm burial. This presentation seeks to build on the discussion of differential burial treatment of individuals interred within midden contexts, broadly among the Maya lowlands, and locally at Palenque.

Lopez, Kirsten (Chronicle Heritage) and Cristina Rodriguez-Franco

[108]

Fire Effects on Obsidian Landscapes: A Case Study

We know fire can affect obsidian hydration, but how do forest fires, and our management practices impact these sites and their potential for data contribution under Criterion D? Is there a different way of going about evaluating data contribution or management practices to work with management in our age of large, intense climate-change influenced fires? In this poster, a combination of X-ray fluorescence and obsidian hydration are used to evaluate the effects of wildfire, and specifically intense wildfires, on the chemical

signatures used in sourcing studies, and relative dating using obsidian hydration. The damages caused by intense heat on these oft-used analyses, and how we may rethink our interpretation of their results. We also explore how this can help us reframe traditional management techniques in our forests, alternatives, and new directions of inquiry and research when these more traditional data sources are deemed no longer reliable for our usual questions of age and transport.

Lopez, Manuel [107] see Gil, Adolfo

Lopez, Rafael [83] see Medina, Minneth

López Bravo, Roberto (Universidad de Ciencias y Artes de Chiapas)

[314]

Chair

López Bravo, Roberto (Universidad de Ciencias y Artes de Chiapas)

[314]

Recent Research about the Chiapanec and the Central Depression of Chiapas, Mexico, during the Postclassic Period
Five years of survey and excavations are providing data regarding Postclassic and contact period Central Chiapas, allowing new proposals regarding the functioning of the Chiapanec polity. This study presents an analysis of the distribution of the population near ancient Chiapan, the capital of the Chiapanec polity at the time of the arrival of the Spaniards. To do this, we use a landscape perspective, which allows us to broadly compare the changes in the valleys of Terán, Suchiapa, and Tuxtla, the Copoya mesa, and the banks of the Grijalva river between the Postclassic period (AD 900–1524) and the present time. The identification of 50 archaeological sites belonging to four different classes suggests that the population was distributed according to the economic and political needs of the Postclassic period when the Chiapanec polity controlled a vast territory of the Central Depression. Surface and excavation materials also provide new perspectives regarding commerce and politics.

López Bravo, Roberto [230] see Paris, Elizabeth

López Camacho, Javier (Escuela Nacional de Antropología e Historia), Luz Evelia Campaña Valenzuela (Independent Reseacher) and Kenichiro Tsukamoto (University of California, Riverside)

[320]

Resultados preliminares del Proyecto Arqueológico Entre Bajos: Ichkabal y su entorno

El Proyecto arqueológico Entre bajos: Ichkabal y su entorno ha realizado intervenciones arquitectónicas en siete estructuras del Grupo Principal y excavaciones extensivas en la Plaza Poniente. En el entorno se verificó la imagen lidar en campo. Ichkabal se encuentra en el sur de Quintana Roo, México, a 11 km al oriente de Dzibanché. Destaca la Plaza Principal de más de tres hectáreas, delimitada al oriente por dos complejos triádicos de 43 y 32 m de alto (Estructuras 4 y 5), al norte por dos templos y al norponiente por el basamento de un complejo tipo acrópolis encarado hacia sur (Estructura 1), al surponiente por el basamento de una plataforma alargada con cinco templos orientados hacia el poniente (Estructura 2). La última estructura forma un agrupamiento tipo E con la Estructura 3, ubicada en la Plaza Poniente. Una aguada cuadrada cierra la Plaza Principal al sur. Los resultados de las excavaciones sugieren que las estructuras fueron afectadas por actividades postocupacionales. La verificación terrestre indica que varios templos que se encuentran alrededor del Grupo Principal fueron situados en la traza urbano con una declinación cercana a los 12 grados respecto al norte verdadero. El entorno contempla calzadas, aguadas y campos levantados.

López García, Diego [309] see Barrientos, Tomas

López-Garzona, Sergio [276] see Meierhoff, James

López Guzmán, Karent [240] see Padilla, Eliseo

Lopez J., Julieta [273] see Murakami, Tatsuya

López Luján, Leonardo [218] see Matadamas-Gomora, Diego

López Mazz, José (Universidad de la República, Uruguay) and Federica Moreno [191]

Coast and Lowlands: Zooarchaeology of La Esmeralda Shell Midden (Uruguayan Atlantic Coast, Late Holocene)
La Esmeralda is a set of three *Donax hanleyanus* shell midden (3000–1000 BP) in which they were capture, processing, and consumption of coastal vertebrates (pinnipeds, fish, and birds) and terrestrial (field deer, mulita, and *Rhea* egg) in an exploitation scheme that includes the coast and the continental lowlands. The use of the *Donax hanleyanus* bank is simultaneous with the hunting of field deer and mulita and the collection of *Rhea* eggs from the grasslands of Laguna Negra. Potrerillo site (3200–2400 BP), located (4 km) on a hill surrounded by floodplains is composed by two earth mounds. The archaeological record of the site shows the exploitation of the surrounding environment (cervids and rodents) but also of the Atlantic coast (sea lion and lithic raw materials). Both settlements show the use of the ecotonal zone that forms the Atlantic coast and the coastal lagoons, may be as part of a coastal-inland mobility circuit. The relations between the coastal and continental occupations have been the subject of discussion for more than 20 years. The discussion should focus on the relative weight of coastal vs. continental resources.

López Mejía, Javier [78] see Jiménez Delgado, Gerardo

López Pérez, Claudia María [214] see Forest, Marion

López Puértolas, Carlos (LANCIC, Universidad Nacional Autónoma de México), José Luis Ruvalcaba-Sil (Instituto de Física UNAM), Eliseo Padilla (Museo Nacional de Antropología), Edgar Casanova-González (Instituto de Física UNAM) and Véronique Darras (CNRS, Université Paris I Panthéon-Sorbonne) [240]

Analyses of Pastes and Polychromy of Chupícuaro Pottery: A Diachronic Comparison Using a Noninvasive Approach
Pottery is one of the hallmarks of the societies that emerged in the present-day Acámbaro Valley known as the Chupícuaro culture (ca. 600–100 BC). The aesthetic features of Chupícuaro ceramics range from complex forms of monochrome ware to polychrome varieties based on three main colors: red, black, and beige. This work examines the pottery and color technology of a broad collection of Chupícuaro vessels. The goal of the research has been to identify the raw materials used to manufacture the coloring materials as well as the pottery clays to address the technological characteristics of the vessels from the early and late periods. For this purpose, a noninvasive analysis protocol has been developed that includes a wide range of analytical techniques such as false color infrared imaging (FCIR), optical microscopy (MO), fiber optic reflectance spectroscopy (FORS), X-ray fluorescence (XRF), and infrared spectroscopy (FTIR). This approach has been applied to a collection of objects from the National Museum of Anthropology of Mexico and the

archaeological excavations of the CHUPICERAM project. The results show differences in the composition of beige colors and black colors. An evaluation of the paste composition is also presented and discussed.

López-Sosa, Maria Clara [3] see Menéndez, Lumila

Lopez Varela, Sandra (UNAM)

[255]

Chair

Lopez Varela, Sandra (UNAM)

[297]

Bridging Borders: Exploring Heritage Management Models in Mexico and the USA through a Conversation with Terry Majewski

In 2014, I had the honor of interviewing Terry Majewski, one of the most influential women in the CRM industry. The insightful dialogue was facilitated through meticulously crafted questions curated by female students participating in my BA course on Heritage Business and Marketing. This conversation delved into her transformative journey as a student who did fieldwork at the Olmec site of Chalcatzingo in Morelos, Mexico. This paper, summarizing the dialogue, introduces a compelling juxtaposition of viewpoints concerning the challenges and possibilities within heritage preservation in Mexico and the United States. A prevailing theme that emerges through the conversation is the necessity of stripping heritage preservation of political implications and advocating for a model that places the public at its core. The conversation traversed into her personal journey, introducing her stature as a woman, mother, scholar, and practitioner. This trajectory is characterized by her willingness to embrace challenges head-on and her unyielding desire to learn something new every day. Terry's journey serves as a beacon to the future female professional, as the conversation highlights the qualities and skills vital for success within archaeology.

Lorenz, Joachim [255] see Wilke, Detlef

Lorenzo, Rachael [269] see Ortega, Ethan

Lorenzo Hernandez, Logel [278] see Hernandez-de-Lara, Odlanyer

Lorenzon, Marta (University of Helsinki)

[119]

Discussant

Lorenzon, Marta (University of Helsinki)

[328]

Unearthing Earthen Architecture: A Geoarchaeological and Environmental Perspective

This presentation combines the findings of two distinct studies focusing on earthen building materials in different border regions, shedding light on the evolution of earthen architectural practices. The first study delves into the geoarchaeological analysis of earthen materials and environmental records from the site of Artashat in Armenia. This research seeks to uncover the dynamics of continuity and change in earthen architectural practices from the Urartian to the classical period in the Caucasus region. The second case study focuses on the geoarchaeological examination of public earthen structures found at two Levantine sites: Ashdod-Yam, linked to the Philistine Iron-Age Pentapolis in Israel, and Palaepaphos (Old Paphos), an ancient Iron Age city-state in Cyprus characterized by intricate multi-period earthen constructions. This contribution discusses the results of

SEM-EDS, FT-IR, XRF, LOI, and micromorphological analysis performed on both case studies and the inference we can make on human-environment interactions in the *longue durée*, the concept of craft specialization in architecture and the identification of communities of practice through the geoarchaeological record.

Loso, Mike [120] see White, John

Loudon, Nysa (University of Glasgow)

[29]

The Ecology and Physical Properties of Gathered Plants in Cordage and Textiles in Prehistoric Scotland

Within the last 30 years of ancient textile and cordage research, new and revisited archaeological evidence and ethnographic studies have shown that prehistoric people in Europe were using a wider range of plant species to produce cordage, netting, mats, and textiles than previously thought. This presentation will take a look at some of the preliminary data gathered on the use of gathered sedges, mosses, and riparian tree species as identified in Scottish non-woven textiles and cordage case studies. It will discuss the method of microscopic analysis and physical testing undertaken with comparative modern botanical samples that will be used to evaluate the inherent physical properties of flora present in prehistoric Scotland cordage and textiles. It is hoped that through delving deeper into the physical properties and ecological research of gathered materials, the relationship between these plants, their environmental context, their use as materials, and the people who worked with them will become clearer. Thus, broadening our understanding of what is and can be a textile or cordage plant in the prehistoric context.

Loughlin, Michael (Stantec) and Christopher Pool (University of Kentucky)

[216]

The Ballgame and Sociopolitical Organization in the Eastern Lower Papaloapan Basin

Although ballgame paraphernalia and figurines depicting ballgame players have been reported from Tres Zapotes and other nearby sites since the 1930s, the identification of ballcourts in the Eastern Lower Papaloapan Basin (ELPB) has been elusive. At Tres Zapotes, the areas between mounds and in the hollows between parallel ridges of the Ranchito group and Lower Terrace could have served as ballcourts. However, no formal ballcourts had been reported in the region. Over the last decade, a large-scale regional survey, aided by Lidar mapping, of the area extending from south of Tres Zapotes to the Late Formative Center of El Mesón has changed this picture. While it is not clear if ballcourts were ever present at Tres Zapotes, a number of ballcourts were indicated by the lidar in Standard Plan architectural complexes that emerged in the region during the Protoclassic and Early Classic periods. Here, we examine the distribution of these complexes across the ELPB, the variation in their form and layout, and make some observations on the roles that these courts, and the ballgame itself, may have played in the sociopolitical dynamics of the Early Classic period in the ELPB.

Love, Bruce [251] see Helmke, Christophe

Love, Michael (California State University, Northridge) and Julia Guernsey (University of Texas, Austin)

[155]

Formative Period Mesoamerican Cities and Low Density Urbanism

Mesoamerica is one of only a handful of places in the ancient world where first-generation cities developed independently, and the lowland Maya cities of the Classic period are frequently cited as prime examples of low-density urbanism. Scholars now recognize that the Mesoamerican urban tradition began well before the Classic period, however, although its scale and extent are still underappreciated. We consider large, low occupation density settlements in Formative period Mesoamerica and their place in Mesoamerica's urban

tradition. Archaeological investigation of these early settlements has revealed the diverse mechanisms utilized by various communities to forge an identity, develop strategies of political integration and centralization, while also participating in broad and robust networks of economic and intellectual exchange. Rather than focus on definitional issues, or whether these settlements qualify as “urban” or “cities”, we explore the nature of these settlements and the trajectory of urbanization in the Formative period. Regardless of what qualifiers are attached to the term ‘urban’, our case studies illustrate how theories of urbanism and urbanization can be brought to bear in analyzing problems of aggregation, settlement growth, and trajectories of social change.

Lovejoy, Aaron [16] see Wagner, Katherine

Lovett, Augustus
[268]

Changing Taste: An Investigation into the Importance of New York Coastal Marine Shells to Albany Foodways during the Nineteenth Century

An examination of the relationships between food and identity is explored among middle-class African Americans in Albany, New York through four periods (early to middle nineteenth century, middle nineteenth century, late nineteenth century, and late nineteenth to early twentieth century). This research synthesizes zooarchaeological data collected from the Stephen and Harriet Myers Residence and historical accounts to understand the foodways of Albany urban residents. This study seeks to consider marine shell use in Albany in a broader interpretive context, drawing parallels between consumer and trade patterns in Albany during the nineteenth century to those of other urban and rural historical communities in the region. The work presented here contributes to a deeper understanding of foodways in the mid-nineteenth century as well as situates the Myers family foodway, that of middle-class African Americans, into the larger context of middle-class consumer patterns.

Lovett, Korrin (Western Michigan University) and Abbey Churney (Western Michigan University)

[44]

Discoveries from the Fort St. Joseph Bead Collection (Past and Present)

As small as they are, beads can create a window into past cultures. Their many uses demonstrate the intricacies of people’s personal preferences, socioeconomic status, religious practices, and much more. There has been no shortage of beads found at Fort St. Joseph, an eighteenth-century mission, garrison, and trading post. Made of glass, ceramic, or bone, hundreds of necklace, rosary, and bracelet beads have been recovered through archaeological excavations at the fort, demonstrating their importance. Our analysis expands on previous research on beads identified at the site with three intentions: to identify newly recovered bead types; investigate their cultural significance; and compare the findings from the previous research with our own newly discovered conclusions.

Lowe, Kelsey [60] see Giovas, Christina

Lowe, Lynne (Centro de Estudios Mayas, UNAM), Emiliano Gallaga (Universidad de Ciencias y Artes de Chiapas) and Emiliano Melgar Tísoc (Museo del Templo Mayor, INAH)
[109]

An Appraisal of the Middle Preclassic Pyrite Mirrors from Tomb 1 of Chiapa de Corzo

Smith and Kidder were among the first to highlight pyrite prehispanic mirrors as “marvels of painstaking craftsmanship” (1951: 44). These mirrors presented a reflective surface consisting of 20–50 pyrite tesserae with beveled edges, perfectly cut, and average 2 mm in thickness. The first known examples of Mesoamerican

mirrors were the “Olmec” type, a concave mirror created from a single hematite piece, developed during the Middle Preclassic period; later, in the Classic period, pyrite mosaic mirrors replaced them. But, to date, we do not understand the changes from one type to the other. In this work, we present the description of two pyrite mirrors found as part of a funerary offering at the site of Chiapa de Corzo, Chiapas, Mexico, dated around 700–500 BC, as possible forerunners of Classic mirrors. Also, we will present traceological analysis of their manufacturing process using experimental archaeology and scanning electron microscopy. Based on these examinations, we identify likely materials and techniques employed in crafting them. We posit that production of these mirrors could have been the result of the development of specialized artisans at distinct workshops, increasing the complexity and labor investment in the lapidary objects as prestige goods.

Lowe, Lynne [114] see Alvarez, Carlos

Lowry, Justin [157] see Paling, Jason

Lowry, Sarah (New South Associates Inc.)

[238]

Discussant

Lowry, Sarah (New South Associates Inc.) and Gabriel Griffin (New South Associates Inc.)

[326]

Using Geophysics for Cemetery Delineation on DOD Installations: Practical Advice, Pitfalls, and Project Examples

Cemeteries and burial grounds are a common feature of the historic landscape, and mapping cemeteries is a consistent and pressing land management need for DOD cultural resource managers. When a cemetery is involved, stakeholders may be diverse and the results can be emotionally charged. Land managers and the public may consider geophysical methods as a straightforward method to identify unmarked graves because they seem to present a simple and noninvasive way to find answers. Geophysical survey results, however, are rarely clear-cut, and they require custom approaches, experienced practitioners, and intensive data processing. New South Associate’s geophysical archaeologists have surveyed over a hundred formal and informal cemeteries both on and off DOD installations. This paper outlines survey strategies for different cemeteries and discusses the evaluation of geophysical survey results. It highlights practical examples of large and small area surveys using multiple instruments including single channel GPR and multichannel GPR in a towed array.

Lozada, Josuhé

[230]

Chair

Lozada, Josuhé, Joel Palka (Arizona State University) and Alizé Lacoste Jeanson (Instituto de Investigaciones Antropológicas)

[230]

Maya Pilgrimage to Interactive Places: Human Bones in Caves at Mensabak, Chiapas

This presentation focuses on the anthropology of pilgrimage as a journey to places outside of everyday realms. For Maya societies, pilgrimages are important for maintaining the relationships between people and nonhuman persons linked to the ritual landscape. In this context, the presence of human bones in caves around the lakes at Mensabak, Chiapas, Mexico, is related to perceptions of personhood and the dividual in ancient, historic, and contemporary Maya societies. We present research on rituals with human bone and artifacts in burial caves near water and rock art, which are shrines associated with various types of persons. We incorporate ethnographic insights from Lacandon Maya regarding the cave shrines, human burials, and nonhuman persons to shed light on these important otherworldly sites.

Lozada, Josuhé [320] see Marengo Camacho, Nelda

Lozada, Josuhé [230] see Shiratori, Yuko

Lozada Mendieta, Natalia (Universidad de Los Andes), Patrick Quinn (University College London) and José Oliver (University College London)

[287]

Chemical and Mineralogical Characterization of Ceramic Traditions on the Precolonial Colombian Middle Orinoco Archaeological Sites

The “Cotúa Reflexive Archaeology Project” (2015–2018) directed by José R. Oliver (UCL, UK) included a ceramic research analysis in the Venezuelan Middle Orinoco area, specifically in three archaeological sites of the Átures Rapids region, to identify trading and interaction process in precolonial ceramic materials. As a result of this study, a chronological occupation model was proposed, based on new radiocarbon data and the definition of new ceramic complexes in the area (Lozada-Mendieta 2020). Between 2021 and 2023, new archaeological sites in the Middle Orinoco area have been found on the Colombian side bank as part of the “Ancient Potters of the Upper and Middle Orinoco Project” funded by Universidad de Los Andes (Colombia). This poster will present the result of the analysis on new ceramic materials from a systematic surface on open area sites and rockshelters associated with rock art and burials. A sample from 15 sites was analyzed using macro trace, petrography, and portable X-ray fluorescence spectroscopy. The results were compared with the ceramic complexes developed for the Venezuelan side, revealing common ceramic fabrics and new paste recipes and vessel forms, most likely related to newly identified funerary traditions and postcontact communities.

Lozano, Jacob (Texas State University)

[205]

From Flowers to Sin: Exploration of Sexuality and Gender in Ancient Mesoamerica

In modernity, sexuality manifests in a dynamic spectrum of expressions which centers on individual sexual awareness, contesting antiquated sentiments of traditional sexual hegemony. In this presentation, we will journey into ancient Mesoamerica in the attempt to conceptualize Maya and Aztec notions of sex and gender by examining various lines of information: archaeological, epigraphical, lexical, and historical sources to isolate and identify representations of sexuality. In addition to the recognition of practices and identity, we will locate, identify, and acknowledge Spanish colonial interpretations of Mesoamerican sexuality in the attempt to understand and counter its influence. In addition, I question modern western theories of sexuality and their ability to truly describe Mesoamerican ideologies of sexual identity.

Lozano, Stephanie (University of California, Riverside)

[273]

The Presence of Maya Aquatic Imagery at Teotihuacan

Previous studies have illustrated the continuing relationship between the Maya area and the Basin of Mexico, especially with the presence of Maya iconography at the site of Teotihuacan. Maya imagery can be seen in diverse cultural materials such as ceramics and stucco-painted murals. For example, researchers have argued that the stucco-painted murals at the Atetelco apartment compound at Teotihuacan have strong connections to the Maya sites of Tikal and Copan. However, previous studies have not focused on the presence of Maya aquatic iconography found within Atetelco’s murals. Therefore, my study analyses the iconography in Atetelco’s stucco murals and suggests that Maya water bands appear but in Teotihuacan style. Maya water bands are seen combined and intertwined with Teotihuacan imagery that is strongly associated with water, such as the reticulated jaguar as well as with the Teotihuacan Tlaloc. In addition, I will highlight other Maya aquatic iconography, such as the Maya water serpent and the Maya water lily both presented in a Teotihuacan style. This new style of Maya aquatic iconography blended in a Teotihuacan style at the great metropolis could reflect the political atmosphere in the apartment compounds during the Early Classic period.

Lucas, Virginia (University of Nevada, Las Vegas; Lost City Museum)**[103]***Precontact Domestic Dogs in the Moapa Valley*

Since the domestication of the dog (*Canis familiaris*), they have been granted various roles within human society. Because of the often close relationship with people, domestic dogs were often given similar burial customs as people. Precontact dog burials have been recovered throughout many regions in North America. Although some of these were incidental burials, others were deliberately buried. While many of the known examples of dog burials in the American Southwest have been studied, to date, the dog burials of the Moapa Valley in Southern Nevada are largely unknown to the archaeological community. Dogs likely served as hunting companions as well as guardians of crops, and in several instances in the Moapa Valley, at least one dog was buried with a person. This poster explores the archaeological context and ethnographic studies in order to examine the relationship between the Lowland Virgin Puebloan peoples and the domestic dog.

Lucero, Lisa (University of Illinois, Urbana-Champaign) and Adrian Chase (University of Chicago)**[251]***House and City: Ancient Maya Water Management in Belize*

The rainfall-dependency of the ancestral Maya shaped their daily and seasonal existence in homes, communities, and cities. They adapted quite well to the annual wet and dry seasonal cycles—as well as extreme weather events like hurricanes, tropical storms and severe droughts, resulting in an enduring history in the tropical jungles of Belize. From farmer to royals, integral to their survival were diverse scales of water features to capture, store, move and drain water—especially for agriculture and a consistent supply of drinking water, as well as for construction (e.g., plaster production), manufacturing (e.g., ceramics), bathing, cooking, and so on. The Maya also treated water with the respect it was due resulting in sacred watery landscapes in addition to those shaped by subsistence water systems creating a complex relationship with water. Maintaining water features required long-term, sustainable management and skill that provided the means to withstand the elements for millennia and provide lessons for present and future water management.

Lucet, Genevieve (IIE-UNAM)**[214]***Epiclassic Palaces: Exploring Social Behavior from Spatial Design*

The built environment expresses the social values applied during architectural design, although these criteria are not always used consciously. Thus, the buildings constructed for the elite of a community show how this group conceives its relationship with the environment and with the other inhabitants, that is, its social behavior. I will compare the residential structures of Cacaxtla, Xochicalco and Teotenango (AD 650–1100). These elite living spaces were used for private, ritual, and governmental activities. The variations in shape, size, quantity, density, boundaries, visuality, and accessibility of the buildings, interior spaces, patios, and plazas testify to a subtle use of architectural language and the search for solutions to different spatial needs. Here, the characteristics of spatial language serve as a basis for the study of relationships between elites and other groups in the community. These, in turn, can also be extrapolated to present hypotheses about political organization of societies.

Luchsinger, Heidi (ERM), Juan Belardi (ICASUR, UNPA-UARG-CONICET), Luis Alberto Borrero (UBA-CONICET) and Flavia Carballo Marina (ICASUR, UNPA-UARG)**[281]***Geoarchaeology of the Southern American Frontier: The Late Quaternary Archaeological Landscapes of the Mack Aike Canyon, Santa Cruz, Patagonia, Argentina*

Geoarchaeological investigations in the Mack Aike Canyon were conducted in March 2023. Located in southernmost Patagonia, Mack Aike is ca. 13 miles (21 km) long and was repeatedly occupied by hunter-gatherer populations for at least 3300 years BP. Alluvial deposits and complex sequences of wetland and eolian deposits within the canyon boundaries were recorded. Three buried paleosols were identified as

marker horizons throughout the canyon. A buried peat deposit at 143 cmbs was also identified through augering and radiocarbon dated to the Middle Holocene. Distribution of the archaeological record throughout the canyon is fairly continuous although density varies likely due to behavioral and postdepositional formation processes. Mack Aike provides protection from a harsh climate and offers abundant resources from an extensive network of wetlands and channels, surrounded by a complex volcanic and glacial landscape. A combination of environmental and archaeological characteristics of Mack Aike facilitated its persistent use and its role in regional mobility until the contact period. In 2024, additional fieldwork and radiocarbon dating will be conducted to test subsurface locations for buried archaeological materials to continue building the chronology of the landscape history and archaeological record of Mack Aike during the Late Quaternary.

Luchsinger, Heidi (ERM)

[336]

Moderator

Ludvigsen, Emma (Vermont State University), Emily Demers (Vermont State University) and Jacqueline Nash (Vermont State University)

[203]

Reimagining the Castleton Medical College through 3D Imaging and Visualization

The Castleton campus of the new Vermont State University is one of the oldest institutions of higher education in the country, first opening its doors to students in 1787 and serving as one of New England's leading medical colleges from 1818 to 1867. Today, the few reminders of this early era in Castleton history are the former Castleton Medical College building, known locally as the "Old Chapel," and a poorly maintained collection of medicines and medical instruments in its entryway. The limited visibility of this collection and the building that houses it obscures the complex history of the medical college's relationship with the town and broader society, including both local graverobbing for medical dissections and participation in the Indian Boarding School movement. This poster imagines a more comprehensive and inclusive exhibit for the Castleton Medical College through 3D imaging of associated artifacts and a digital reconstruction of the medical college building.

Luján Dávila, Milton, Carmela Alarcón Ledesma and Peter Eeckhout (Universidad Libre de Bruselas)

[158]

Un taller de Spondylus dentro de un edificio ritual en Pachacamac, Costa Central del Perú (ca. 1470-1533 dC)

En la Costa Central del Perú, las investigaciones llevadas en el Edificio B15 de Pachacamac recuperaron materiales malacológicos que nos acercan a conocer las diferentes actividades realizadas tanto dentro de este edificio como de este prestigioso sitio durante los períodos tardíos. Los objetivos del análisis fueron identificar los especímenes malacológicos y recuperar la mayor información de fabricación de conchas a partir del análisis de la muestra. Los resultados aportan mucha información sobre el uso de los recursos marinos, con ello se puede conocer los recursos utilizados para la alimentación y aquellos utilizados para la fabricación de adornos, ofrendas y otros artefactos de probable uso ritual. Los recursos fabricados fueron la muestra más importante en el análisis, destacando el *Spondylus*. Se han identificado todos los pasos de elaboración de los artefactos, desde la acumulación de la materia prima y pasando por las diferentes etapas de fabricación hasta la obtención del objeto final. Las evidencias sugieren que este taller probablemente refleja la presencia de artesanos Chimú desplazados desde la Costa Norte en el marco de la política imperial inca.

Luján Dávila, Milton [81] see Lau, George

Luján Dávila, Milton [215] see Leishman, Kendra

Luke, Christina [83] see King, Adam

Luncz, Lydia [126] see Reeves, Jonathan

Lund, Justin (Northern Arizona University)

[181]

Discussant

Luo, Shengqiang [315] see Lam, WengCheong

Luoto, Miska [219] see Tallavaara, Miikka

Lupo, Karen [201] see Edwards, Nicolette

Lupu, Jennifer (Northwestern University)

[89]

A Queer Afterlife: Re-excavating the Halcyon House Collection

A rumored tie to LGBTQ history has drawn people to the Halcyon House archaeological collection across several decades. In this talk, I draw on Sara Ahmed's concept of queer phenomenology that conceptualizes queerness as an "orientation" toward certain objects and bodies. What does it mean to seek resonance in the past through queer ancestry? How does the tangibility of material culture prompt a queerly tactile relationship to the past? Located in the Georgetown neighborhood of Washington, DC, the Halcyon House mansion's grounds were excavated in 1985 but the project became embroiled in funding disputes and was never completed. Archaeologists had found many more artifacts than initially expected, many dating from the early twentieth century when the property was owned by Albert Adsit Clemons who was rumored to have lived with a male carpenter. The artifacts include makeup remains, alcohol bottles, and lingerie items marketed to women at the time. In 2018, after learning about the collection, I was drawn to study it through my own queer identity in relation to queer pasts. Drawing on engagement with LGBTQ-identified community members, I think through the meaning of "queer heritage" to frame the collection's connection to various actors throughout its tumultuous existence.

Luque, Luis [126] see Alcaraz-Castaño, Manuel

Luurtsema, Anna (University of Pennsylvania), Kara Larson (University of Michigan), Henry Wright (University of Michigan) and Alicia Ventresca-Miller (University of Michigan)

[169]

Persistence in Pastoralist Practices during the Uruk Period at Tepe Farukhabad

The Uruk period (4100–3100 BCE) was a transformative time in Southwest Asia, marked by the precursors of writing, the rise of urbanization, and an intensification in cross-cultural interactions. Subsistence strategies were shifting as well, as hunting declined relative to herding and animals such as sheep and goats became favored for both their primary and secondary products. Tepe Farukhabad, located on the Deh Luran plain on the fringes of Mesopotamia, offers an opportunity to study how these developments manifested in changes in herd management strategies. In this paper, stable isotope analysis is used to investigate the herding strategies utilized in the Middle and Late Uruk through the reconstruction of the diet and landscape use of herded ruminants from Tepe Farukhabad. Sequential sampling of sheep and goat teeth produced carbon and oxygen isotope values ($\delta^{13}\text{C}$ and $\delta^{18}\text{O}$), which showed a variety of herding strategies were implemented in both the Middle and Late Uruk. Some animals were foddered or herded seasonally to higher elevations in order to access better grazing pastures, while others were herded near

the site. The variety of strategies used at Tepe Farukhabad reflects resilience among pastoralists in the midst of the many changes of the Uruk period.

Luzzadder-Beach, Sheryl (University of Texas, Austin)

[31]

Discussant

Luzzadder-Beach, Sheryl (University of Texas, Austin) and Timothy Beach (University of Texas, Austin)

[295]

Soils, Water, and Agriculture in the Maya Lowlands: Lidar and Paleoproxies Reveal New Perspectives on Complexity and Resilience

Questions of human subsistence, impacts, and response to environmental change have driven decades of research on ancient life in the Maya Lowlands. While traditional geoarchaeology and paleoecology methods have already documented a rich variety of agricultural and subsistence options in the Maya Lowlands, the lidar mapping revolution of the last decade has deepened these questions and their answers in extent, scope, magnitude, and meaning. In this paper, we synthesize the results of our three-plus decades of research on Ancient Maya agriculture and resource use in Belize, Mexico, and Guatemala, including soil and water resources, and present the results of our latest lidar, field validation, and laboratory campaigns in the Maya Lowlands. Our first lidar collection was in 2016; our coalition group of several archaeological project partners in Northwestern Belize collected another set of lidar data in 2022, extending our 2016 aerial coverage. Meanwhile our teams conducted field seasons in Guatemala in 2022 and in Belize in 2023 to follow up on features identified in lidar for these respective regions through field survey and excavation. We present our recent field and lab validation results from Northwestern Belize in the context of our other studies across the region.

Luzzadder-Beach, Sheryl [125] see Beach, Timothy

Luzzadder-Beach, Sheryl [130] see Colón Loder, Wilhemina

Luzzadder-Beach, Sheryl [130] see Smith, Byron

Lynch, Elizabeth (Eastern New Mexico University; University of Wyoming) and Marcel Kornfeld (University of Wyoming)

[197]

Undiscovered Country: The Ground Stone Tools Assemblage from Hell Gap National Historical Landmark

One of the most complete records of human activity on the North American Plains, between 13,000 and 8,500 years ago, is found at the Hell Gap National Historic Landmark in Wyoming. The area was inhabited continuously during this period as evidenced by the five main site localities. While we know a good deal about the activities on site from chipped stone tools and fauna, the ground stone has yet to be integrated into site interpretations. Our general assumptions about cultural practices during this time presume the exclusive use of ground stone as a means to create other types of tools, for instance, shaft abraders or for processing ochre. At Hell Gap there are more than 30 ground stone artifacts ranging from abraders and hammerstones, to palettes. They are found throughout the site's localities. The artifacts are associated with the Folsom, Hell Gap, Eden-Scottsbluff, and Agate Basin cultural components. In this presentation, we describe the materials found in close proximity to these ground stone tools to put the implements in context and build a picture of how they fit within our current knowledge of Hell Gap and Paleoindian material culture and to test our current assumptions about their function.

Lynch, Joshua (Arkansas Tech University) and Angela Gore (SWCA)

[138]

Investigating Beringian Hunting Toolkits from Experiential Perspectives

Experimental archaeology is an underutilized methodology for investigating variability in projectile point

technologies of Upper Paleolithic Siberia and Late Pleistocene/early Holocene eastern Beringia. This paper presents the results of a multifaceted experimental research project combining 1) actualistic testing of three Paleo-arctic projectile point styles and 2) use-wear analysis of a large sample of osseous and lithic tools from 11 eastern and western Beringian archaeological sites to test established hypotheses of projectile point variability in the north. A major component of this project was the 3) development of scaffolded and scalable student-centered learning activities tailored to engaging the general public, stakeholders, and Indigenous communities through hands-on experimental archaeology and object-based teaching. Understanding the functions of these important artifacts can inform on the significance of inter- and intrasite assemblage variability in Beringia and adaptive responses to shifting resources during the Pleistocene/Holocene transition across Beringia. Here we present developing behavioral models to explain the variable projectile technologies, including seasonality, site-specific or prey-specific activities, raw-material conservation, and ballistic performance of weapon systems as contributing variables.

Lynch, Paige (University of New Mexico)

[80]

Sociopolitical and Environmental Change and its Effect on the Biology of a Medieval Polish Population through Isotopic Analysis

The Late Medieval to Early Modern periods in Poland underwent a shift toward a feudal sociopolitical structure and experienced environmental changes leading to an increase in social stratification and an unequal distribution of power, opportunity, and resources (e.g., food). This project examines how a non-elite Polish population biologically responded during periods of significant sociopolitical change using molecular and skeletal analysis of human skeletal remains, correlated with historical documentation. Cemeteries from the Late Medieval village of Gać (fourteenth–sixteenth centuries) and Early Modern village of Pień (seventeenth–eighteenth centuries) comprise non-elite individuals. The proximity of these villages to nearby centers and the potential for involvement in complex economic exchange networks make the sites ideal to examine the complex interplay between biology and culture. Preliminary data investigates how serfdom and global cooling impacted dietary access to traditional food sources, including terrestrial/marine protein and C₃-based crops (e.g., wheat, barley). This study presents analyses of strontium and oxygen isotopes to distinguish between “migrants” and “residents” and carbon and nitrogen stable isotopes to assess diet. It is hypothesized that diet will differ between migrants and residents and there will be less access to traditional protein sources and an increase in C₄ (millet) consumption for residents.

Lynch, Paige [80] see Wysocka, Joanna

Lynch, Sally

[76]

Analyzing Highland and Coastal Ceramic Techniques of Production in the Middle Horizon Period

The relationship between coastal and highland cultural groups during the Middle Horizon remains widely debated and still not fully understood. Scholars have argued that “Coastal Cajamarca” plates found in Moche sites on the coast are local imitations of high-quality kaolin plates from the Cajamarca polity in the Highlands. My research examines the production techniques employed in the creation of “Coastal Cajamarca” plates with other Moche and Cajamarca ceramic styles retrieved from the Late Moche (AD 500–800) archaeological site, Huaca Colorada, in the Jequetepeque Valley along the North Coast of Peru. By comparing techniques of production, my investigation challenges the prevailing notion that “Coastal Cajamarca” vessels were imitations of foreign elite wares. Rather, they were not local creations but were introduced to the site alongside other highland Cajamarca ceramics, including the distinctive “Kaolin Plates” and utilitarian “Cajamarca Coarse Red” ceramics. Employing technological analysis, I illustrate the shared production techniques between “Coastal Cajamarca” ceramics and highland vessels, distinct from the methods used in crafting local Moche ceramics. This finding underscores that these ceramics signify more than the movement of elite goods or the copying of foreign elite styles by local Moche artisans.

Lyons, Scott**[186]***Burning Questions: The Ogata Archaeological Site and Kofun Period Ironworking*

The Ogata archaeological site in modern Osaka Prefecture, Japan, has come to be seen as representative of large-scale blacksmithing sites and technology of the Middle and Late Kofun period, and many artifacts related to ironworking have been unearthed from hearth features there. Accordingly, many of these hearth features are typically interpreted as remains of ironworking hearths. However, other pyrotechnologies were also practiced at and near Ogata, and so the tendency to view all pyrotechnological features as relating to ironworking has the potential to distort our understanding of Middle and Late Kofun period ironworking technologies. This presentation will reexamine the blacksmithing remains unearthed at Ogata, paying close attention to the variety of production activities conducted there, as well as its long-term trajectory as a place of technological and economic exchange in close proximity to the political center of the Japanese archipelago. This revised interpretation of the site clarifies not only the changes in ironworking technology seen at Ogata and in the Middle and Late Kofun period more broadly but also the ways in which “specialist” workshop sites in this period are integrated in exchange networks of varying sizes through both their specialist and peripheral production activities.

Lyste, Kerry [6] see Ek, Jerald

Ma, Hongjiao [334] see Mion, Leïa

**Maass, Claire (SNA International, in support of the Defense POW/MIA Accounting Agency),
 Amanda Friend (SNA International, in support of the Defense POW/ MIA Accounting Agency),
 Lesley Chesson (Defense POW/MIA Accounting Agency) and Gregory Berg (Defense
 POW/MIA Accounting Agency)**

[70]*A Novel Application of $\delta^{15}\text{N}$ Values to Segregate Human and Nonhuman Remains*

Archaeologists are routinely tasked with sorting and identifying osseous remains in complex assemblages. When dealing with non-diagnostic fragments or significant taphonomic alterations, a straightforward determination of human or nonhuman based on osteological analysis is not always feasible. This study tests the use of nitrogen isotope delta values ($\delta^{15}\text{N}$) of bone collagen for determining if osseous remains are human or not. Previous research, using a large dataset of modern casework samples from the Defense POW/MIA Accounting Agency Laboratory, calculated lower limits for human bone collagen $\delta^{15}\text{N}$ values that can be used to assess whether osseous remains “are probably” nonhuman (7.50‰) or “are” nonhuman (6.35‰). This study builds on that previous work by testing the applicability of the limits in broader archaeological contexts. We applied them to bone collagen data for humans and nonhumans found in the published archaeological literature (>30 studies, sample size ~1,500). Our findings support the conclusion that $\delta^{15}\text{N}$ values can be useful for differentiating human and nonhuman osseous remains and have applications globally within archaeological contexts.

Mabry, Jonathan (Desert Laboratory, University of Arizona)**[75]***La Playa and the San Pedro Phase in the Sonoran Desert*

The origins of village lifeways foundational to more complex precontact societies in northwestern Mexico and the southwestern United States can be traced back to the independent development of irrigation and associated social changes in early irrigation communities at La Playa and sites in the Sonoran Desert during the San Pedro Phase between 1200 BC and AD 50. This presentation describes the regional and cultural contexts of agricultural intensification, changes in material culture, and inferred new social institutions at La Playa during the San Pedro Phase.

Macari, Josefina [178] see Huidobro, Consuelo

Macari, Josefina [282] see Soto, Victoria

MacDonald, Brandi [24] see Boulanger, Matthew

MacDonald, Brandi [236] see Britton, Emma

MacDonald, Brandi [255] see Davenport, James

MacDonald, Brandi [42] see Huntley, Jillian

MacDonald, Brandi [42] see Koonce, Jacob

MacDonald, Brandi [42] see Mahan, Samantha

MacDonald, Brandi [118] see Navas-Méndez, Ana

MacDonald, Brandi [227] see Petras, Elysia

MacDonald, Brandi [41] see Qais, Deepr Sanjid

Macdonald, Danielle (University of Tulsa), Ahmad Thaher (University of Tulsa), Lisa Maher (University of California, Berkeley) and Theresa Barket (California State University, Los Angeles)

[265]

From Triangles to Rectangles: Exploring Change Over Time at the Epipaleolithic Site of Kharaneh IV, Jordan

The multicomponent Epipaleolithic site of Kharaneh IV, located in the Azraq Basin of eastern Jordan, documents ~1,000 years of occupation by hunter-gatherer groups late in the Last Glacial Maximum. Multiple lines of geomorphological, faunal, and archaeobotanical evidence indicate that the environs around the site were well-watered, lushly vegetated, and rich in a wide variety of animal species, clearly drawing human populations to the area. Early and Middle Epipaleolithic groups congregated repeatedly and for prolonged periods in this verdant landscape, perhaps even coming from the Mediterranean and Red Sea areas. This poster discusses changes in lithic technology at the site from the Early to the Middle Epipaleolithic. These changes will be examined through the conceptual framework of the *chaîne opératoire*; where the entire production, use, and discard sequence is considered integral to understanding how stone tools were developed and maintained at such an aggregation site. Changes in the *chaîne opératoire* from the Early to the Middle Epipaleolithic illuminate the different strategies employed by the inhabitants of Kharaneh IV, and when paired with other aspects of material culture, highlight changes in these communities over time and their adaptations to a dynamic landscape unlike that of today.

Macdonald, Danielle [129] see Clark, Amy

Macdonald, Danielle [139] see Maher, Lisa

Macdonald, Danielle [337] see Miller, Mel

MacDonald, Faith [233] see Gragson, Ted

MacFarland, Kathryn (Arizona State Museum, University of Arizona)

[305]

Chair

MacFarland, Kathryn (Arizona State Museum, University of Arizona)

[305]

The Creation and Curation of Archaeological Data

The Arizona State Museum (ASM) Repository holds collections associated with thousands of archaeological excavations that span the advent of anthropologically oriented archaeology in the American Southwest. Encoded with these collections are various approaches to excavation and data management, which have dramatically changed over time. Repository personnel will standardize terminology as much as possible, for

internal institutional searchability purposes. The curation facility will also create metadata and add attribute information to the collections to meet their various legal and agency requirements, applying consistent data formatting and institutional ontologies to promote long-term usability of the collections. The idea is to ensure that the artifacts are findable for all stakeholders, including researchers interested in revisiting collections for reanalysis, and integrating artifacts into big picture research questions, but this is challenging to accomplish. Excavated materials and associated data from the Grasshopper Field School (1964–1992) are an illustrative example of the inherent impediments to reconstructing and integrating excavation datasets for a single, long-term excavation for collections management needs, while also considering the challenges associated with comparing complex excavation datasets for big picture research questions. This paper focuses on archaeological data as an aspect of the “curation crisis” and explores options for finding common ground.

MacIntosh, Sarah [103] see Willis, William

Maciw, Alannagh (University of Toronto), Giles Morrow (Vanderbilt University), Stephen Berquist (Sewanee: University of the South) and Ellen Pacheco (University of Toronto) [76]

Transitions in Past and Present: The Introduction of Huaca Dos Cruces and Huaca Tronco Prieto

The transition into the Late Intermediate period (LIP) (~1000 CE) held many changes for residents of the Cañoncillo region, but as of yet it is unclear why the prominent sites of Huaca Colorada and Tecapa were abandoned in favor of nearby mounds and architectural complexes. These shifts may result from a combination of social and environmental pressures including the introduction of new cultures like the Chimú and Lambayeque to the region, shifts in ideology, as well as dune encroachment. LIP sites in the southern Jequetepeque Valley exhibit ceramic markers of both cultural traditions, some of which are certainly produced on-site. This paper introduces the sites of Huaca Dos Cruces and Huaca Tronco Prieto where the Cañoncillo team will begin excavations in 2024. Covering an area of 5 km², the sites are composed of three prominent mounds surrounded by agricultural fields and small domestic enclaves. Preliminary survey in 2023 established distinct use areas including workshops, cemeteries, and possible ceremonial spaces with formal architecture. With the diversity of activities already visible at the sites, as well as evidence of multiple cultures interacting with them, these sites have the exciting potential to demonstrate a wide-ranging view of LIP society in the region.

Maciw, Alannagh [30] see Gonzalez-La Rosa, Luis Manuel

Mack, Jennifer (University of Mississippi Medical Center) [312]

Ever True to Thee: Archaeo- and Osteobiographies from Asylum Hill

Founded in 1855, the Mississippi State Lunatic Asylum saw 30,000 patients pass through its doors before the institution moved to a new facility in 1935. Vital expansion of the University of Mississippi Medical Center (UMMC), located on the former asylum property, prompted historical and archaeological investigations of the now-unmarked Asylum Hill Cemetery, which holds the graves of 4,000–7,000 individuals who died as patients. In accordance with the wishes of potential descendants, identification of the dead is a primary goal of the project. Poor bone preservation in many graves limits the data that can be used to build osteobiographies, but intensive artifact analysis provides complementary information for comparison with family oral histories and surviving patient records. Though no identifications have been made among the first 335 individuals exhumed, the narratives revealed by their skeletal remains and associated coffin hardware, clothing remnants, and personal items foster a deeper understanding of the institution and its patients, contradicting the popular perception of asylum residents as “locked up and forgotten.” ***This presentation includes visual representations of excavated human remains, but not photographic images.

Mackie, Madeline (Weber State University)**[219]***Chair***Mackie, Madeline (Weber State University), Todd Surovell (University of Wyoming), Spencer Pelton (Office of the Wyoming State Archaeologist), Robert Kelly (University of Wyoming) and Matthew O'Brien (California State University, Chico)****[219]***Clovis-Folsom Overlap at the La Prele Mammoth Site*

The nature of the transition from Clovis to Folsom complexes has long been an area of interest for Pleistocene archaeologists in the West. While it has been hypothesized that Folsom was an innovation started during the Clovis time period there have been few clear cases of temporal overlap. A recent find at the La Prele Mammoth site in Converse County, Wyoming offers new evidence relevant to this enduring problem. Dating to approximately 12,950 years ago, the La Prele Mammoth site contains the remains of a Columbian mammoth alongside activity areas associated with butchery. The densest of these areas, Block D, also returned a diagnostically Folsom fluted point along with mammoth ivory, bone needles, ochre, and butchered mammal remains. Using geoarchaeology and spatial analysis we discuss the relationship between the Clovis and Folsom diagnostics at the site to better understand the relationship between these two complexes.

Mackie, Madeline [20] see Baka, Abby

Mackie, Madeline [20] see Doering, Briana

Mackie, Madeline [308] see Kelly, Robert

MacKinnon, Amy [269] see Harvey, Amanda

MacLellan, Jessica (Wake Forest University) and Daniela Triadan (University of Arizona)**[285]***Toying with Classic Maya Society: Ceramic Figurine Whistles and Children's Socialization at Ceibal, Guatemala*

We analyze 253 Late and Terminal Classic (ca. AD 600–950) Maya ceramic figurine whistles (*ocarinas*) and fragments excavated at Ceibal, Guatemala, as materials of socialization. The figurines are mold-made and represent repeating characters. Based on mortuary contexts and other evidence, we argue they were used in household performances and associated with women and children. Children could easily access and play with these everyday objects. As in the case of modern toys, like Barbie dolls, the cast of characters represented in the figurine whistles was determined by adults and tells us about dominant ideologies, including gender and beauty norms. For example, women were shown as active participants in both public and domestic life, while men were shown in public but not domestic roles. As agents of socialization, children could have reimagined or subverted narratives around these objects. However, the materiality of the figurines limited play and shaped social structures for centuries.

Macrae, Scott (University of Central Florida)**[289]***Chair***Macrae, Scott (University of Central Florida), Vo Thi Phuong Thuy (Vietnam Academy of Social Sciences), Ekaterina Menkina (University of Alabama) and Le Ngoc Han (Institute of Archaeology, Vietnam)****[289]***Searching for Settlement at the Dai Co Viet Capital of Hoa Lu, Vietnam*

Established in 968 CE the city of Hoa Lu was the first unified capital of the Dai Co Viet. This ancient capital is

found in the UNESCO World Heritage Site of the Trang An Scenic Landscape Complex, Vietnam. It was constructed of two enclosures bounded by a series of embankment walls adjoining steep cliff faces created by the karst mountains topography. While a clearly defined city, little archaeological research has identified the inhabitants and their subsequent settlement outside the royal echelon of the palace. In search of residential occupation outside the city embankment walls, within the sharply contrasting topography of soaring karst mountains and low-lying floodplains, the first systematic settlement survey was initiated by the IRAW@Hau Lu research project. This presentation will discuss the method employed, obstacles overcome, and ultimately results of the 2023 field season.

Macrae, Scott [289] see Menkina, Ekaterina

Madella, Marco [288] see D'Agostini, Francesca

Mader, Christian (University of Bonn), Markus Reindel (German Archaeological Institute), Johnny Isla (Peruvian Ministry of Culture) and Julia Meister (University of Würzburg)
[299]

Agricultural Life and Socioeconomic Dependencies in the Western Andes of Southern Peru during the Second Half of the First Millennium BCE

The Formative Paracas archaeological culture has long been considered a coastal phenomenon in the southern Peruvian Andes. In this paper, we change this perspective and examine two Late Paracas and Initial Nasca (370 BCE–CE 90) highland settlements: Collanco (1,630 m asl) and Cutamalla (3,300 m asl) in the province of Lucanas, Ayacucho. Drawing on recent archaeological and geoscientific investigations—including large-scale excavations, archaeological and geomorphological surveys, photogrammetric documentation, soil testing, phytolith analysis, radiocarbon dating, and community-based research—we not only study these settlements in terms of their chronology, layout, and use but also pay special attention to their adjacent extensive agricultural terraces. We argue that such terrace-settlement systems must be understood as a single analytical unit in order to fully understand the organization, socioeconomic dependencies, and supraregional significance of these complexes. Collanco and Cutamalla formed part of a dense and continuous Paracas settlement pattern from the Pacific coast to the highland puna and were integrated into interregional exchange networks. Furthermore, our results reveal intensive and diverse agricultural strategies, complex dependencies both among people and on resources from multiple ecological zones, and changing climatic conditions that affected terrace cultivation, land use, and settlement on the western flank of the Andes.

Madgwick, Richard (Cardiff University)

[334]

Chair

Madgwick, Richard (Cardiff University), Carmen Esposito (University of Bologna) and Angela Lamb (British Geological Survey)

[334]

Exploring Social and Economic Change at the Bronze Age–Iron Age Transition in Southern Britain: A Multi-isotope and Zooarchaeological Approach

The Late Bronze Age and Early Iron Age (ca. 800–400 BC) was a time of great transition in various parts of Europe, largely relating to climatic deterioration and the breakdown of networks surrounding the production and trade of Bronze. In southern Britain this saw the rise of a new site type, commonly termed a midden. These vast monumental mounds, some comprising millions of artifacts/ecofacts dominated by animal bone and ceramics, signal a societal refocus toward agricultural intensification and communal feasting on a grand scale. This suggests that feasts had a role in mediating new networks and husbandry regimes during this phase. This paper presents results from the FestNet project, which explores the scale and nature of the networks surrounding feasting events and new approaches to agricultural intensification at a time of climatic

deterioration. A program of strontium, oxygen, sulfur, carbon, and nitrogen isotope analysis on domestic animals from six sites demonstrates different catchments and variable husbandry regimes across both sites and species. Zooarchaeological research has enriched these interpretations, providing evidence for both extensive and specialized animal management strategies. These data provide new insights on the problematic issue of how the economy and patterns of connectivity changed during this transitional phase.

Madgwick, Richard [334] see Bricking, Adelle
 Madgwick, Richard [334] see Dibble, Flint
 Madgwick, Richard [334] see Esposito, Carmen
 Madgwick, Richard [91] see French, Katherine
 Madgwick, Richard [334] see Holt, Emily
 Madgwick, Richard [334] see Mion, Leia
 Madgwick, Richard [334] see O'Brien Butler, Ciara
 Madgwick, Richard [334] see Rand, Asta

Madsen, David [306] see Davis, Loren

Mady, Sarah
 [115]
Chair

Mady, Sarah
 [115]

Artifacts of Motherhood: Revisiting the AUB Museum Collection

The AUB Museum collection of motherhood encompasses amulets, infant feeding bottles, and figurines. All these items are connected to the maternal body and specifically to motherhood. However, finding and identifying such artifacts is challenging as they might resemble ordinary objects: Infant feeding bottles could have been used as oil lamp fillers, droppers, or small pitchers. Additionally, figurines could have been used in rituals and as children's toys. As with most donated museum artifacts, we face several challenges related to their provenance and context (mortuary, domestic, etc.). This paper explores a collection of artifacts that could be identified as artifacts of motherhood and understand their function and use. Thus, this paper aims to widen our understanding of women and children's relationship with each other, health, and death.

Maestas, Richard [41] see Greaves, Russell

Maezumi, Yoshi [60] see Giovas, Christina

Maffie, James
 [25]

The Mexica Tzompantli ("Skull Rack") as Life-Energy Battery Pack

The Mexica *tzompantli* ("skull rack") consisted of multiple, agricultural-style ordered rows of human skull-seeds. As such it constituted an enormous "battery pack," or milpa, that contained, stored, and radiated the life-energies and powers contained within the still animate skull-seeds placed on its rows. Its principal function was to actively rejuvenate, refortify, and renew Tenochtitlan, the Mexica lifeway, and the Mexica cosmos—not (as commonly averred) to intimidate functionaries visiting from other polities or intimidate the citizenry of Tenochtitlan, and not (as commonly averred) merely to symbolize or represent its fearsome power and efficiency at dispatching enemies.

Magoon, Dane (University of Leicester), Dale Hutchinson (University of North Carolina, Chapel Hill) and John Krigbaum (University of Florida)**[201]***From Maize Presence to Maize Incorporation: An Integrated Bioarchaeological Approach for Exploring Early Histories of Maize in the Eastern Woodlands*

Recent research has highlighted the difficulties with identifying the presence of early maize in the bioarchaeological and paleoethnobotanical records of the Eastern Woodlands. Simon et al. (2021) found that there is no hard evidence of Middle Woodland maize for the region, and the earliest verified maize is now synchronous with the chronological framework outlined by Larsen et al. (1991) based on dental caries data. This paper outlines an integrated exploratory approach using dental caries and carbonate-apatite carbon spacing ($\delta^{13}\text{Cca-co}$) data from archaeological bone for investigating early microhistories of maize, focused on the tidal fresh portion of the James River drainage in coastal Virginia.

Mahan, Samantha (Archaeometry Laboratory, University of Missouri Research Reactor Center), Alexandra Kuo (Archaeometry Laboratory, MURR), David Stalla (Electron Microscopy Core, University of Missouri), Gregor Bader (Senckenberg Center for Human Evolution and Palaeoenvironment) and Brandi MacDonald (Archaeometry Laboratory, MURR)**[42]***Microanalysis of Late Stone Age Rock Art Ochre Pigments in Eswatini*

Eswatini is home to several rock art sites of the Late Stone Age in Southern Africa. Ochres, iron-oxide rich pigments, are present in many of these sites but their compositions are yet unknown. Previous studies of ochres have shown the potential for the identification of trade, resource management, and other aspects of human behavior. The analysis of ochres in Eswatini rock art has implications for mineral selection in the Late Stone Age and could lead to future studies of ochre sourcing in Eswatini. Samples were taken from seven sites in northern (Sibebe, Nsangwini, Ntjoni, Mkhumbane, Nkamberi), southern (Nhlonhleni), and eastern (Muti Muti) Eswatini and were analyzed by SEM-EDS and Raman spectroscopy. The preliminary microanalysis is presented here and shows iron oxides, iron-rich clays, manganese oxides, and other mineral compounds.

Mahar, Ginessa (University of Florida) and Kenneth Sassaman (University of Florida)**[317]***Investigating the Sustainability of a Woodland Fish Trap on Florida's Northern Gulf Coast*

The increase in frequency and intensity of storm events in the twenty-first century has inspired communities worldwide to reconsider their investment and approach to coastal infrastructure. As often is the case, modern problems serve to inspire archaeological inquiry. In this paper we explore the advantages and drawbacks of permanent coastal infrastructure during a time of increased social complexity along the Florida Gulf Coast. Heightened gathering events tied to summer solstice ceremonialism required communities of the Woodland era to develop technologies to support seasonal increases in population. However, changes in sea level, storm events, and other environmental impacts may have affected the sustainability of such coastal infrastructure and potentially contributed to eventual site abandonment and a reconfiguration of social life. We bring together several lines of data in this paper to better understand the benefits and vulnerabilities that coastal fish traps would have provided these communities. Data presented are from Richard's Island Fish Trap, a shell-based construction situated to the immediate south of a Civic-Ceremonial Center known as Shell Mound (8LV42), and includes lidar, excavation, and coring, as well as comparative and experimental datasets.

Maher, Emma (Western Michigan University)**[284]***Revealing the Past through Ceramics*

Twenty-five years of excavation at Fort St. Joseph, an eighteenth-century mission, garrison, and trading post, have uncovered a large variety of artifacts, including hundreds of ceramic sherds. These ceramic pieces can

provide valuable information about individuals living at the post including their socioeconomic status and access to materials. Information about trade relations can also be revealed as ceramics were produced and shipped from Europe. This research will examine ceramic sherds recovered archaeologically from Fort St. Joseph in order to identify the types present at the site. Specifically, pieces of French faience will be analyzed in hopes of gaining insights on the varieties present and what they may indicate about the daily lives of those living on the edge of the French empire.

Maher, Lisa (University of California, Berkeley), Danielle Macdonald (University of Tulsa), AJ White (University of California, Berkeley) and Jordan Brown (University of California, Berkeley)

[139]

From Wetlands to Deserts: The Role of Water in the Prehistoric Occupation of Eastern Jordan

In the Azraq Basin of Jordan, dramatic landscape changes from wetlands to desert resulted in shifts in settlement and land use over time suggesting that, like today, water availability was crucial for past populations. Changing environmental conditions throughout the Pleistocene and Holocene had significant impacts on human population movements and land use. Recent work at the 20,000-year-old site of Kharaneh IV indicates settlement of this intensively used aggregation site around the end of the Last Glacial Maximum with abandonment by the start of a second drying period, Heinrich Stadial I. In contrast to narratives that associate aggregation and “settling in” during the Epipaleolithic with climatic amelioration, intensively occupied sites in eastern Jordan are also associated with shrinking wetlands. Drying at the onset of HI led the visitors and occupants of Kharaneh IV to reconsider their use of this location for large-scale settlement, and aggregation sites soon disappear entirely from the region—perhaps even the very practice of aggregation as a socioecological strategy. Epipaleolithic occupants of the Azraq Basin, and elsewhere, experienced similar situations to modern-day inhabitants of this region, where water is an increasingly dwindling and precious resource that continues to shape how people engage with the landscape.

Maher, Lisa [265] see Macdonald, Danielle

Maher, Lisa [139] see White, AJ

Mahler, Robert [95] see Stark, Robert

Mai, Javier [164] see Spenard, Jon

Maines, Clark [91] see Bonde, Sheila

Majewski, Teresita (Statistical Research Inc.)

[297]

Discussant

Majumdar, Anena [166] see Goulding, Ella

Makarewicz, Cheryl [334] see Buckley, Michael

Maki, David [153] see Arnott, Sigrid

Makowski, Krzysztof, Martha Palma (“Pachacamac Valley” PUCP Archaeological Program) and Ana Fernández (“Pachacamac Valley” PUCP Archaeological Program)

[185]

“The Dead Do Not Leave”: LH Funerary Behaviors in Pueblo Viejo Pucara

Pueblo Viejo-Pucara, main settlement of mitmaqunas, Caringas de Huarochiri, is one of the emblematic cases of funerary behaviors involving the construction and use of open chambers. In most of the cases studied, the two-story structures of 1 m high each story, which fulfill the original function of storage rooms in each modular residential unit, are adapted for funerary purposes. The chambers of both floors are accessible through small square windows. The funerary structures directly adjoin the living spaces in use. The settlement, located on the hills of Manzano and Pucara, on the left bank of the Lurin River, was intensively excavated by the PUCP team between 1999 and 2012. The paper presents the results of the reconstruction of the funerary behaviors of burial, reburial, and complex taphonomic processes after burial.

Makris, Nicos [18] see McCoy, Mark

Maldonado, Antonio [67] see Yebra, Lucía

Maldonado Vite, María (Instituto Nacional de Antropología e Historia, México)

[216]

Discussant

Malischke, LisaMarie (Auburn University, Montgomery)

[153]

Daily Life through Thousands of Artifacts: Revealing Patterns at French Fort St. Pierre (1719–1729) via Multivariate Statistics

As archaeologists revisit old collections, we strive to develop new, efficient ways to analyze complex datasets with thousands of artifacts. My own work attempts to do so through a reanalysis of the collection and architectural features of Fort St. Pierre (1719–1729). Almost wholly excavated in the 1970s, Fort St. Pierre, near present-day Vicksburg, Mississippi, was located between the Illinois Country and newly established New Orleans and Fort Rosalie in Natchez. The use of multivariate statistics updates Stanley South’s methods and allows for comparisons to contemporaneous French and Native settlements along the Mississippi River corridor. Statistical results combined with excavation and documentary evidence demonstrate the materiality of daily life as well as a looting event in the community’s final hours. Altogether this syncretic approach to the violent termination of the fort highlights early eighteenth-century French and Native sociopolitical struggles in the lower Mississippi River region.

Malit, Nasser [55] see Waweru, Veronica

Malkoun, Lauren [141] see Dodd, Lynn

Mallios, Seth and Shannon Farnsworth (San Diego State University)

[192]

WPA Murals as Historical Artifacts: What Is Archaeology’s Role in the Preservation, Protection, and Analysis of Early Twentieth-Century American Art?

When US President Franklin D. Roosevelt formed the Works Progress Administration (WPA) in 1935 as part of the New Deal, his goal of rescuing the United States from the Great Depression was predicated on

the creation of a flurry of new jobs that resulted in extensive public infrastructure as well as providing money for those skilled in the arts. One product of this investment was the production of thousands of artistic murals around the country. This paper argues that these WPA-era murals should be considered artifacts and studied within the discipline of archaeology and sub-discipline of historical archaeology. It questions why archaeology has not embraced WPA art as material culture worthy of study even though it falls within many established parameters of the field. Using examples of recently discovered and restored artwork at San Diego State University, we suggest that historical archaeologists are especially suited for complex issues of historic preservation and can be important interdisciplinary collaborators with art historians, museum curators, and others.

Mallios, Seth [205] see Bastide, Jamie

Mallol, Carolina [119] see Simões, Carlos

Malloy, Hayley (National Park Service) and Alicia Paresi (National Park Service)
[89]

Why So Blue? The Great Island Tavern and Its Legacy

Archaeological collections and their perpetual care allow archaeologists an opportunity to right wrongs and revisit interpretations of site formation and identity. Looking at past methodologies through our twenty-first-century professional standards allows for a more objective review of both field and post-field practices. Over time, management decisions can have lasting effects on collections that archaeologists continue to spend time and money to unravel. We will present a case study of the Great Island Tavern collection from Cape Cod National Seashore that was excavated in 1969. The site lacks credible field documentation and an inherent bias led to a questionable interpretation of the site. The artifacts have suffered irreversible damage from ad hoc display techniques, experimental conservation, and manipulation of computer data. These well-intended attempts to rectify past mistakes further diluted the data that can prove the identity and function of this site. Both the initial field and legacy collection teams worked autonomously without any foresight for the long-term viability of this collection. The work that now remains can best be described as the archaeology of archaeology. The inherent bias assuming that “storage room” work and collection management are not actual archaeology hampers efforts to work toward higher standards.

Malone, Alex (New Mexico Consortium), Jayde Hirniak (Arizona State University), Mary Kliejunas (Plumas National Forest, USDA Forest Service) and Grant Snitker (New Mexico Consortium)
[282]

Experimental Heat Treatment on Basalt Lithic Artifacts to Identify Wildfire Effects on Prehistoric Archaeological Sites

In recent years, the USDA Forest Service is increasing the pace and scale of fire and fuels management to mitigate the impacts of uncharacteristically severe wildfire. Due to the consequences of global climate change, wildfires are not going away. It is vital that we understand the effects that wildfires have on our cultural resources. Multiple studies have investigated the effects of fire on obsidian and chert artifacts; however, little research has been conducted on basalt lithic artifacts. In portions of the Plumas National Forest that were impacted by the catastrophic 2021 Dixie Fire, there are numerous of basalt lithic artifacts, but we cannot fully grasp the effect fire had on them due to the lack of research. For this study, we seek to enhance our understanding of fire effects on basalt artifacts by conducting a series of controlled heating experiments (temperature and dosage) to test the effects of heating on experimentally produced basalt flakes. From these results, we hope to set a baseline for fire effects on basalt artifact that can be applied to observations made in the field, as well as provide information to managers so they can better protect and manage cultural resources the event of a wildfire.

Malone, Gráinne, Meredith Chesson (University of Notre Dame), Tommy Burke (Independent Scholar), Meagan Conway (University of South Carolina) and Ian Kuijt (University of Notre Dame)

[46]

Building Island Futures with Heritage-Based Tools: Archival Records from Inishark and Inishbofin, Co. Galway, Ireland
Throughout the nineteenth and twentieth centuries under British rule, tax assessors, census takers, and Church personnel routinely recorded key aspects of the lives of Inishark and Inishbofin islanders. This research investigates house-by-house village histories through valuation records, historic maps, and baptism and wedding records. Using these documents, we seek to create village maps showing where families lived through time, and to share these findings with today's islanders. Our research uncovers many stories that are concealed in government archives. We seek to reunite these stories and records with the families whose descendants we work with today. In this ongoing process of reclaiming and mapping out local knowledge, we are working to establish a local archive of these records and our research results to be housed in the Inishbofin library. Ultimately, this research contributes toward islanders' efforts to connect with their pasts and build their futures.

Malone, Gráinne [46] see Kuijt, Ian

Maloney, Jillian [262] see Wriston, Teresa

Malvarez García, Gonzalo Carlos [222] see Martos Nieto, Miriam

Mandel, Rolfe (Kansas Geological Survey)

[20]

Geoarchaeology and Paleoenvironmental Context of Magic Mountain (5JF223): A Stratified Site on the Front Range of the Southern Rocky Mountains, North-Central Colorado

The Magic Mountain site (5JF223) in Golden, Colorado, has long been recognized as one of the most important stratified archaeological sites on the Front Range of the Southern Rocky Mountains. Although Archaic artifacts have been recorded there, the site's richest and most extensive cultural deposits represent multiple Early Ceramic occupations dating to ca. 1800–800 cal BP. In this paper, the soil-stratigraphy of the site is described, and results of $\delta^{13}\text{C}$ analysis of soil organic matter (SOM) are used to infer bioclimatic change for the period of record. At 5JF223, a buried landscape marked by a prominent paleosol in alluvium occurs beneath nearly 2 m colluvium. Temporally undiagnostic artifacts occur on and within the paleosol. The paleosol was buried by colluvium soon after 9000 cal BP, and sedimentation ended soon after ca. 800 cal BP. The $\delta^{13}\text{C}$ record at 5JF223 indicates that C_4 grasses became an increasingly more significant component of the plant community from ca. 8900–6800 cal BP, suggesting that a warming trend (Altitheermal) occurred then, and peaked around 6800 cal BP. After 6800 cal BP, a mixed C_3/C_4 plant community was in place, though the amount of SOM contributed by C_3 plants increased during the Early Ceramic occupations.

Mandel, Rolfe [20] see Blecha, Erika

Mandel, Rolfe [319] see Bourgeon, Lauriane

Mandel, Rolfe [281] see Holcomb, Justin

Mandel, Rolfe [20] see Potter, Bethany

Mandel, Rolfe [316] see Joyce Seals, Leila

Manfred, Carson (Western Michigan University), Erika Hartley (Western Michigan University) and Kieran Blake (Western Michigan University)

[41]

Musket Ball Analysis at Fort St. Joseph

Firearms and ammunition were used by military officers, traders, European settlers, and Native Americans in hunting and warfare throughout New France. To better understand military forts, trading posts, and European

settlements, flintlock-related objects can be examined to determine the types of firearms being used at Fort St. Joseph, who was using them whether it was military personnel or civilians, and what country the firearms originated from. At the eighteenth-century site of Fort St. Joseph, an examination of flintlock components revealed the presence of more gun parts related to trade or civilian muskets than those of military weapons, confirming its important role as a trading post. However, several other components recovered from the site were badly rusted and unable to be assessed. To assist with this examination, an analysis of musket balls recovered from the site will be completed in hopes of determining the firearms used at the site and their country of origin. Through this research additional knowledge on the flintlocks available in the Great Lakes Region will be gained and can contribute to our understanding of military and trading operations in the area.

Manfredi, Sophie

[271]

Colonial Archaeology and Deep Time Media: A Case Study from Hokkaido, Japan

As the study of past human activity through the analysis of artifactual data, archaeology involves the excavation of materials, digging deep into the earth to unveil pottery, house foundations, and animal remains. By excavating deep into the earth, the past time of human history is re-created, but only through the eyes of archaeologists and a public who concerns themselves with their work. Through the interpretation and display of archaeological artifacts and data, I argue that these artifacts constitute a form of deep time media, taken from the deep time of the earth and used for our own modern day purposes. By applying Krämer's (2015) media studies philosophy of messengers and traces to the archaeological record, I look at how archaeological materials are the result of traces being left behind that are then interpreted through the social and political context of the archaeologist, particularly within the context of the Indigenous Ainu of Hokkaido. This paper explores narratives used by the Japanese Empire concerning the Ainu to legitimize first their national and colonial projects.

Mangado, Xavier [162] see Sánchez De La Torre, Marta

Mangut, Chiamaka (Columbia University) and Kristina Douglass (Columbia University)

[174]

Unearthing the Past: Tracing Settlement Continuity in Dutsen Kura Hill, Central Nigeria

This paper reports the possibility of the settlement continuity from the Later Stone Age (LSA) to the present in Dutsen Kura on the Jos Plateau, Central Nigeria. Archaeological survey and preliminary excavation at Dutsen Kura reveal fascinating results that suggest a continuous Later Stone Age occupation and a transition from stone working population to ceramic use. Our multidisciplinary approach combines systematic archaeological surveys, oral accounts, and excavations. Previous investigations have already unveiled critical insights into the rich history of this region. Evidence of early human habitation and a remarkable cultural transition during the LSA has emerged, shedding light on the complex dynamics of this ancient society. The excavation and analysis of artifacts, supported by GIS technology, have revealed settlement patterns and human-environment interactions that provide a deeper understanding of the region's past, enriching our understanding of the daily lives, beliefs, and traditions of the people who once inhabited Dutsen Kura Hill.

Manin, Aurelie (University of Bordeaux), Isaac Barrientos (Centro de Estudios Mexicanos y Centroamericanos) and Karine Lefebvre (Universidad Nacional Autónoma de México, CIGA)

[260]

Early Animal Use in Rural New Spain: Comparing Trends and Practices in Sixteenth- to Seventeenth-Century Indigenous and Spanish Settlements from Michoacán, Northwestern Mexico

The massive introduction of European animals in what is today Mexico started in 1519 and historical documents attest for the rapid spread of livestock, in particular cattle, in the vast plains of the Altiplano that helped colonize the lands. Yet, there is a lack of material evidence to understand better the husbandry practices and the reactions of the local populations toward these new animals. So far, most of the

archaeological evidence has been obtained from urban centers, which tend to concentrate the Spanish population. But a recent archaeological project on the rural settlements of Northern Michoacán has allowed us to obtain new zooarchaeological data combined with fine-tuned cultural, social, and historical contexts. Here we compare two sites, only distant of ca. 50 km: Cuarum, an Indigenous village built on the northern shore of the lake of Zacapu, and an isolated Spanish building on the southern bank of the Lerma river registered as site PAI. Radiocarbon dating and ceramic typo-chronology indicate that both sites were occupied between 1560 and 1650. In Cuarum, local and introduced European fauna have been consumed in small quantities. In PAI, several thousands of bone remains suggest the large-scale processing of animal bodies.

Manin, Aurelie [183] see Thornton, Erin

Mann, Rob (St. Cloud State University)

[153]

Chair

Mann, Rob (St. Cloud State University)

[153]

French or British? Identifying the Eighteenth-Century Ceramics from a Minnesota Fur Trade Post

This paper reports on a recent project to reanalyze the European-made ceramics from archaeological site 21MO20, an eighteenth-century fur trade post near present-day Little Falls, Minnesota. The original interpretation of site 21MO20 as a French-era trading post, possibly associated with French trader Joseph Marin, was the result of Doug Birk's groundbreaking work at one of the few eighteenth-century fur trade post sites identified in Minnesota. The primary objective of this project was to determine if the tin-enameled ceramics recovered from 21MO20 are French faience or British delftware and hence to determine if the site dates to the pre-1763 French colonial era or the post-1763 British colonial era of Minnesota history. In order to determine the cultural origins of the tin-enameled ceramics recovered from site 21MO20, I conducted a comparative analysis of the tin-enameled ceramics recovered from other eighteenth-century sites in Minnesota and the Great Lakes region, including Grand Portage/Fort Charlotte, Fort St. Charles, Sandy Lake, and Fort Michilimackinac.

Manney, Shelby [173] see Heilen, Michael

Manney, Shelby [207] see Polanyi, Tamas

Manquen, Brody (University of Texas, Austin), Thomas Garrison (University of Texas, Austin), Alex Knodell (Carleton College) and Demetrios Athanasoulis (Ephorate of Cyclades, Hellenic Ministry of Culture)

[191]

Remote Sensing Remote Islands: Error Analysis of Lidar-Based Archaeological Survey of the Small Cycladic Islands, Greece

The Cyclades, Greece, are islands with well-documented histories of human occupation and use. Among the larger islands in the archipelago there are many small, currently uninhabited islets with referenced land-use histories, including for agriculture and pasturage (goat islands). Despite these references, there have been few archaeological investigations into their individual use histories or into their role in broader Cycladic history. The Small Cycladic Islands Project (SCIP) seeks to understand the land-use history of these islets through lidar remote sensing and ground pedestrian survey. Using lidar, we model the entirety of each island to detect landscape features and create highly accurate digital elevation products useful for understanding the human relationship with the landscape over time. While proven to be useful for archaeological feature detection through dense forest cover, less attention has been given to lidar's archaeological utility in the maquis shrubland and jagged topography common in the Mediterranean. Here we report our analysis of

accuracy, error vectors, and utility of lidar survey conducted during the 2023 field season in the eastern Cycladic islets around Andros, Mykonos, Tinos, and Amorgos.

Mant, Madeleine (University of Toronto Mississauga)

[62]

Chair

Mant, Madeleine (University of Toronto Mississauga) and Zoe Alker (Lancaster University)

[62]

Inside and Out: Interdisciplinary Approaches to Injured Bodies in Industrializing London (1760–1901)

“Skin and Bone” examines the embodied experience of injury, accidents, and interpersonal violence of over 65,000 Londoners during the Industrial Revolution (1760–1901). Osteoarchaeological datasets from the Museum of London Centre for Human Bioarchaeology in combination with contemporary hospital (Middlesex, Royal London, Guy’s, St. Thomas’) and criminal justice records (England and Wales Criminal Registers, Millbank Prison Register, Home Office Prison Licenses, Metropolitan Police Habitual Criminal Register) from London, which note age, sex, and occupation alongside many bodily features (such as wounds and scars), provide a means of accessing and contextualizing embodied experiences. This project has generated an open-access multivariate database and innovative approaches to studying and visualizing the historic body. Uniting bioarchaeological, historical, and digital humanities datasets, this project explores the possibilities of studying the impact of industrialization and urbanization on the human body. This work is centered within the ecological model of violence, emphasizing the interconnections between individual, relationship, community, and society. Layering the osteoarchaeological and text-based data sources highlights how violence is literally embodied, as healed (e.g., remodeled fracture trauma; a fading scar) and unhealed (e.g., bones showing evidence of healing processes; fresh wounds requiring hospital treatment) injuries are considered within individual bodies and across the broader sample.

Mantha, Alexis (Champlain College, Saint-Lambert)

[81]

The Upper Marañón after Chavín and before the LIP: Glimpse into Poorly Documented Times

While the Late Intermediate period (LIP) in the upper Marañón region is well known for its unique surface stone architecture such as tall multistoried tombs, the periods immediately following the Early Horizon are still poorly documented and understood. Nonetheless, excavations at the site of Rapayán in Ancash and surface ceramics collected at a few heavily farmed settlements suggest a long and uninterrupted sequence of occupation spanning from the Formative to the LH. Furthermore, surface architecture in the upper Marañón, which has been mostly dated to the LIP, exhibits strong stylistic similarities with Early Intermediate/Middle Horizon architecture of Huamachuco (Marcahuamachuco) and the Callejones de Huaylas / Conchucos (Recuay). Combining the analysis of surface architectural stylistic variations and excavated data, I explore, through a comparative approach, the potential conservativeness of settlements in the region. I then discuss the possible implications of such findings to the understanding of social organization and political authority in the post-Chavín era of the upper Marañón.

Mantha, Alexis (Champlain College, Saint-Lambert)

[185]

Discussant

Manzanilla, Linda (U Nacional Autónoma de México)

[218]

Discussant

[152]

Chair

Manzanilla, Linda (U Nacional Autónoma de México)**[152]***Introduction: What Happened after the Fall of Teotihuacan?*

The fall of the metropolis of Teotihuacan with the 570 CE great fire in the core of the settlement shook Mesoamerica. Demographic displacements, balkanization into small polities, military competition between sites, were all events of the so-called Epiclassic. This symposium will review data from my interdisciplinary project “The Study of Tunnels and Caves in Teotihuacan” (1987–1996),” behind the Pyramid of the Sun. The four tunnels excavated extensively were used by Epiclassic and Postclassic individuals, who lived inside, left traces of domestic and craft activities, and a vast array of ritual contexts, most of which involved Coyotlatelco and Mazapa burials. The use of different geophysical techniques (magnetometry, electrical resistivity, gravimetry, and ground-penetrating radar) was an important aspect. Different radiocarbon dates were compared with obsidian-hydration data. Chemical analyses of activity areas in one of these tunnels provided one of the different perspectives involving the study of activity areas, together with polished tools and obsidian objects. The presence of a substantial Coyotlatelco occupation, the transition between Coyotlatelco/Mazapa, another definitely Mazapa, and one involving Aztec occupants, gives us one of the most complete set of dates, as well as archaeobotanical, archaeozoological, osteological, ceramic, lithics, and other archaeological materials from post-Teotihuacan times.

Manzanilla, Linda [152] see Chavez, Rene

Manzano, Bruce [319] see Bonzani, Renee

Mao, Ruilin [51] see Cui, Yinzh

Maralngurra, Gabriel [156] see May, Sally

Marciniak, Arkadiusz (Adam Mickiewicz University in Poznan)**[116]***Climate Change and Social Sustainability: The Case of the 8.2-ky BP Climate Event and the Demise of the Neolithic Community at Çatalhöyük in Anatolia*

The social strategy of imposed egalitarianism provided solid foundations for the unprecedented growth of the Neolithic community inhabiting the large settlement at Çatalhöyük for more than half a millennium. Its constituting elements comprised symmetry and balance among cross-cutting sodalities, as well as integration of domestic and ritual domains. However, the persistence of this social modus operandi started to disintegrate ca. 300 years before the ultimate abandonment of the settlement. This ongoing process was further strengthened by a significant deterioration of the local climate linked to the 8.2-ky BP event. In this paper, I intend to unpack the slow demise of the imposed egalitarian social system and the impact of climate-induced changes. In particular, I will outline the character of the resilience strategy adopted by these communities in wetter and drier climates. These processes are manifested in the reorganization of the settlement’s occupation, changes in architecture and burial practices, as well as in the economy and subsistence basis. They will be examined in the context of changes in the natural environment and the exploitation of its immediate environs.

Marcomini, Antonio [12] see Longo, Laura

Marcone, Giancarlo (University of Engineering and Technology [UTEC]), Bryan Nuñez (Municipalidad de Cerro Azul) and Nina Castillo (Proyecto Qhapaqñan - Sede Nacional)
[124]

A 10-Year Evaluation of El Guarco Project and Its Impacts in the Local Interactions at Cerro Azul, Peru

In the year 2014 as part of the Qhapaq Ñan project, a long-term intervention at the site of El Guarco in the coastal town of Cerro Azul was started. The project was thought from the beginning within the framework of collaborative archaeology and the relation with local people. This paper asks after 10 years of intervention in the site and permanent presences of the national project in the locality for the possible impacts—positive and negative—and how this project transformed or not the relation of the town with their heritage. We especially ask how the different actors like the state program, the local municipality, the association of fisherman, and others segments of Cerro Azul civil society adapt, transform, and create discourses around the Inka site, looking to their own necessities? We propose that although sometimes contradictory, these discourses were able to find an equilibrium that inspire a rebirth of the community's relationship with the archaeological site. While we believe that this relationship is positive, they are still in an embryonic stage, in part because the majority of initiatives are still top-down proposals with moderate local people participation given room for development of better co-creation initiative of heritage management.

Marek-Martinez, Ora (Northern Arizona University)

[15]

Enriching Archaeological Interpretations with Tales from the Rez: Braiding Indigenous Knowledge into Archaeological Praxis

“In order to know yourself and find your way in this life, you need to know where you and your People come from and understand their relationship with the land.” This insight formed critical foundational knowledge that guides my Indigenous archaeological praxis. My experience and knowledge as a first-generation Indigenous woman archaeologist has created a difficult pathway to being an archaeologist. My experience and knowledge are often misunderstood by archaeologists and dismissed as being unimportant to understanding the past. This practice contributes to further marginalization of Indigenous archaeologists and Indigenous knowledge, it also pushes Indigenous archaeologists out of the discipline and creates a vacuum of information and pedagogy that has the potential to transform archaeological practice and pedagogy. The “tales from the Rez” that Indigenous archaeologists share with one another and their communities reflects a pedagogical shift in the need for braiding Indigenous knowledge into archaeological practice in order to shift the power that lies within archaeological interpretations to one that centers collaborations with, by, and for Indigenous Peoples and Communities. This process and shift creates pathways for archaeologists to learn how to work with Indigenous Communities to braid Indigenous knowledge into the stories they tell about our deep past.

Marek-Martinez, Ora (Northern Arizona University)

[182]

Moderator

Marengo Camacho, Nelda (Boundary End Archaeology Research Center), Josuhé Lozada (Instituto Nacional de Antropología e Historia) and Gabriel Merino Andrade (Proyecto Espeleológico Cerro Brujo)

[320]

Karst Landscapes and Uses of Caves among the Prehispanic Zoque People of Cerro Brujo, Ocozocoautla, Chiapas

Cerro Brujo is located in central Chiapas and is part of a mountain ridge that forms different karstic rockshelters, caverns, and caves. Early Zoque groups inhabited the area, took advantage of the resources, and developed symbolic activities in the interior of the cave system. Nearly a decade ago, the speleological “Grupo Jaguar” started expeditions to recognize the region. Recently, in collaboration with the INAH, a more systematic methodology has been developed to better understand interactions between Zoque groups and their terrain. Our research focuses on documenting the archaeological and geomorphological features in this region to add knowledge of geographical and cultural characteristics that define the human-landscape

relationships. The project also looks to create spaces for community engagement and outreach activities in closer modern towns. This paper discusses the joint efforts of a transdisciplinary study that directs to the enlightenment and preservation of the cave system and the archaeological material culture.

Marengo Camacho, Nelda [79] see González López, Ángel

Marina, Flavia Carballo [281] see Luchsinger, Heidi

Marin-Arroyo, Ana [247] see Straus, Lawrence

Marín Calvo, Antonio (Proyecto Templo Mayor, INAH) and Diego Matadamas-Gomora (Tulane University)

[79]

An Overview of Autosacrificial Instruments in Mesoamerica: Ethnohistory, Iconography, and Archaeology

It is well known that autosacrifice was a common practice among Mesoamerican societies since at least the Middle Formative period (ca. 900–300 BC). Iconography suggests that elites offered their blood and did penance to contact with the sacred realm. However, ethnohistoric evidence reveals that this practice was also carried out by non-elites with diverse objectives, using a variety of artifacts and in private spaces. While sacrifice has been recognized as a public act, autosacrifice seems to have been conceived as a personal and private ritual. For this reason, autosacrificial instruments are generally found in funerary contexts, accompanying their owners. Furthermore, archaeology has made it possible to identify autosacrificial tools in domestic contexts, showing the significance of this practice within different social levels. This presentation will offer an overview of the instruments used for autosacrifice in Mesoamerica through archaeological, iconographic, and ethnohistoric data to offer a cross-cultural approach to this fundamental ritual among Mesoamerican societies, stressing the variations through time and space.

Marini, Silvia [202] see Purcell, Gabrielle

Marino, Maeve (University of Akron), Megan Shaeffer (Summit Metro Parks), Charlotte Gintert (Summit Metro Parks) and Timothy Matney (University of Akron)

[45]

Shift Success: A Field School Solution from the COVID Era

The archaeological field school is a critical experience for all students interested in pursuing archaeology. It is required to obtain employment in CRM and often to continue to graduate school. However, the traditional structure of a field school is inaccessible and unsustainable for numerous college students today. The COVID-19 pandemic and the restrictions placed by institutions and governments exacerbated the inaccessibility of field schools and forced professors and site directors to rethink how they were structured. The University of Akron and Summit Metro Parks, partnering organizations in the Community Archaeology Summer Program (CASP), were no exception to this problem. The result of their COVID-era problem-solving was simple and highly effective: shift-based scheduling. CASP has now permanently implemented this strategy for field schools, making it more accessible and sustainable for both CASP and students.

Marken, Damien (Bloomsburg University)

[74]

Discussant

Markens, Robert (Instituto de Investigaciones Estéticas, Universidad Nacional Autónoma de México)**[252]***Reconsidering Tomb 7 at Monte Albán: Style, Ethnicity and Migration*

Monte Albán's Tomb 7 is the most famous prehispanic find in Oaxaca owing to its exquisite mortuary offering. Since 1932 when Dr. Alfonso Caso and his colleagues discovered the treasure, archaeologists have routinely ascribed the deposit to Mixtec migrants since the tomb's objects were rendered in the Mixteca-Puebla style. This ethnic ascription is the product of an essentialist perspective on style where the geographical extension of an ethnic group is believed to coincide with that of its style. When objects of a foreign style are found, they are explained by exchange or migration. On the contrary, the relationship between ethnicity, style, and territory is much more fluid. During the Postclassic period, the Mixteca-Puebla style was disseminated and adopted by different ethnic/linguistic groups throughout the Central and Southern highlands. One of the mechanisms responsible for its diffusion may have been the exchange of marital partners and sumptuary goods among the royal houses of the region in order to establish political alliances. In light of these considerations, I address several fundamental issues regarding Tomb 7. Who was buried in the tomb? What was their ethnicity? And why were they buried at Monte Albán 700 years after its abandonment?

Marks, Theodore (New Orleans Center for Creative Arts), George Leader (College of New Jersey), Abi Stone (University of Manchester), Kaarina Efraim (National Museum of Namibia) and Rachel Bynoe (University of Southampton)**[225]***Narabeb: Examining the Middle Stone Age of the Namib Sand Sea*

The Namib Sand Sea (NSS) in Namibia is known to preserve a wide variety of Pleistocene-age archaeological sites. However, few Middle Stone Age (MSA) sites in this region have been systematically investigated and basic questions around chronology and technological organization remain open. Here we examine Narabeb Pan, an open air MSA surface site deep in the NSS first documented in the 1970s, and then reexamined in 2021 and 2022. Lithic technological analysis combined with geomorphological and optically stimulated luminescence (OSL) dates from Narabeb provide some of the first understandings of human-environmental interactions and preliminary estimates of chronology from the Late Pleistocene of the NSS. These data provide the foundation for larger, regional-scale analyses of early human adaptive strategies in this unique environment of Southern Africa.

Marks, Theodore [165] see Ostahowski, Brian

Marquardt, William (University of New Mexico, United States Forest Service)**[171]***Investigating Possible Hopi "Neighborhoods" at Pottery Mound (LA 416), New Mexico*

Hopi oral histories have a long tradition of migration and movement across the Greater Southwest and Mesoamerica. Archaeological evidence of the movement of Hopi people is well attested across the Middle Rio Grande Valley. Pottery Mound (LA 416) in the Lower Rio Puerco Valley has long been known to have connections with ancestral Hopi people through both oral traditions and archaeological evidence. This poster explores the possibility of discrete Hopi "neighborhoods" in Pottery Mound through spatial analysis of Sikyatki ware sherds located during the course of a 2014 surface survey of Pottery Mound. Kernel Density and Ripley's K-Function analysis tools in ArcGIS is employed to statistically analyze the spatial relationship of these surface finds in an attempt to locate stronger than expected occurrences of these distinctly Hopi vessels. These analyses revealed higher than expected concentrations of Sikyatki ware sherds in the western and southwestern portions of Pottery Mound. While these results alone do not confirm distinctive Hopi "neighborhoods," analyses point to strong spatial clustering of surface Hopi artifacts at Pottery Mound hinting at potential movements of a subset of the population possibly toward the Hopi Mesas or of a group from Hopi settling at Pottery Mound.

Marques, Sophia (University of Virginia)**[223]***The Valle de Mairana, Bolivia (ca. 1000–1532 CE): Elucidating the Everyday*

Sometime during the Late Intermediate period or the Late Horizon, the Valle de Mairana, Bolivia, became part of the farthest reaches of the Inka empire, which at its height spanned the Andean mountain range from Colombia to Argentina. However, relatively little is currently known about the people who lived in this valley during these centuries. How did the materiality of daily life respond to and shape people's lived experiences of and within larger scale transformations surrounding Inka imperialism in the valley? This paper addresses this question with data from pedestrian survey, subsurface testing, and excavation in the valley. A focus on the small-scale realities of lived experience centers the agency of past peoples in shaping their world. What was important to people? How was that negotiated materially? How can we better understand the relations and choices that contributed en masse to large-scale sociopolitical trends? From this, we begin to explore power and agency in imperial processes, epistemologies of the mundane, and the materiality of relational ontologies.

Márquez, Belén [25] see Baquedano, Enrique

Márquez Abad, Carla [243] see Alexandrino Ocaña, Grace

Márquez-Osuna, Angélica (Harvard University, Weatherhead Scholars Program)**[83]***Beekeeping in the Yucatán Hacienda: The Role of the Melipona beecheii in the Nineteenth-Century Rural Landscape from an Environmental History Approach*

This paper examines the role of the stingless bee *Melipona beecheii* in nineteenth-century Yucatán and shows how the rise of the hacienda system played a contingent role in reshaping beekeeping practices and human-bee relationships. Using primary sources such as beekeeping manuals and wills, this paper will reconstruct the way beekeeping became a central component of both the agricultural projects of the hacendados (or hacienda owners) and in the agro-urban economy that flourished in Yucatán as a response to food scarcity in times of war. Finally, it will show that at the end of the nineteenth century, the domestic hives' significance increased to the point of becoming a notable category recorded in the first economic census of domestic animals. How can we best understand the presence of the *Melipona* in the late nineteenth-century Yucatán Peninsula? I argue that during a period of upheaval, extraction of natural resources, environmental exploitation, *Melipona beecheii* continued to be the most important bee species used for beeswax and honey extraction in the entire peninsula in the nineteenth century.

Marsh, Erik (CONICET, Laboratorio de Paleo-Ecología Humana, UNCuyo, Argentina)**[306]***Chair***Marsh, Erik (CONICET, Laboratorio de Paleo-Ecología Humana, UNCuyo, Argentina), Silvina Castro (CONICET, Laboratorio de Paleo-Ecología Humana), Lucía Yebra (CONICET, Laboratorio de Paleo-Ecología Humana) and Cortegoso Valeria (CONICET, Laboratorio de Paleo-Ecología Humana)****[306]***Spear-Thrower or Bow? Refining Comparative Metrics to Track the Cultural Transmission of Bow Technology in the Andes*

The appearance of new projectile technology can be among the most significant shifts in a region's history. To metrically distinguish dart and arrow projectile points, we present new data on hafted archaeological projectile points from museums in South America and compare them to published data from North America.

We suggest that using oversized ethnographic arrows as comparative data can lead us to misidentify small dart points as arrows. We recommend building comparative baselines only with archaeological points, which better reflect the metric impact of points' use-lives. Hence there seems to be no universally applicable comparative dataset or discriminant formula, but there are clear tendencies. We applied these to a database of lithic projectile points ($n = 422$) from 21 archaeological sites in the Andes (16° – 37° S). We carefully graded point integrity to eliminate retouched or recycled points. In our database, the earliest arrow-sized points are from ~ 1800 cal BP in the Lake Titicaca Basin (16° S), later than previously suggested for the earliest Andean bows. Farther south in Mendoza (34° S), similarly sized points appear later, ~ 1300 cal BP. Over this part of the Andes, our data suggest a southward trajectory of bows, which quickly replaced spear-throwers.

Marsh, Erik [266] see Castro, Silvina

Marsh, Erik [306] see Hu, Di

Marsh, Erik [248] see Yranich, Alexei

Marsh, Erik [67] see Yebra, Lucía

Marshall, Aubree (Michigan State University)

[69]

You Better Be-Leaf It: Microbotanical Remains Found in Dental Calculus of Individuals from Actun Kabul, Belize
Dental calculus (DC), the mineralized plaque or tartar on a tooth's surface, is formed and fossilized during life. Foodstuffs and medicinal plants that people interact with in life can be caught in the DC matrix. Because DC fossilizes during life, researchers can decalcify DC and analyze the microbotanicals, proteins, and aDNA trapped inside. Microbotanical analysis was conducted on multiple individuals from the site of Actun Kabul, Belize. Dietary isotopic data has previously been collected from these individuals. While the isotopic data provides information on the ratios of C_3 to C_4 plants and of terrestrial to marine protein for each individual, microbotanical remains provide a more nuanced view of what food and medicine an individual had access to and consumed. Because there are few microbotanical studies of DC in the Maya region, this study aims to demonstrate the feasibility of the method and discuss its applicability in Mesoamerican research.

Marshall, Lydia (DePauw University) and Thomas Biginagwa (University of Dar es Salaam)

[26]

A Mutual Gaze: Watching and Being Watched in the Unsettled Sociopolitical Landscape of Early Twentieth-Century Southwestern Tanzania

Archaeologists have long considered surveillance as a tool of control—for example, over enslaved or colonized peoples. But what of cases where the gaze goes both ways? The first two decades of the twentieth century were marked by seismic sociopolitical upheavals in what is now southwestern Tanzania: German colonialism and missionization, the anti-colonial Maji Maji War, the slow decline of the regional slave trade, and later British colonial conquest. Rashid bin Masoud, a slave and ivory trader, established Kikole as an entrepôt in the late 1890s. Residents there both negotiated and contributed to a predatory landscape through their participation in the slave trade. Bin Masoud's followers built a palisade around Kikole, dug wells inside its walls, and used massive termite mounds as reported watchtowers. These features, which enabled defense and surveillance, were also essential in 1905, when local Ngoni leaders attacked twice in retaliation for bin Masoud's support of German efforts to quash the Maji Maji rebellion. This paper considers mutual surveillance as a framework to understand how Kikole residents simultaneously inhabited the roles of watcher and watched. Such an approach may be of particular use to archaeologists studying surveillance in unstable sociopolitical contexts in which power was contested.

Marston, John (Boston University)

[256]

Chair

Marston, John [256] see Ramsey, Monica

Martens, Tracy (Royal Saskatchewan Museum)

[37]

Archaeological Textiles in the American Museum of Natural History's Bandelier Collection

Between 1892 and 1903, Adolph Bandelier undertook an ethnographic and archaeological expedition to Peru and Bolivia, collecting materials on behalf of the American Museum of Natural History (AMNH). Bandelier sent four crates of materials back to the AMNH from Caleta Vitor, northern Chile, including mummies, grave goods, and other fiber and stone artifacts. This paper provides the first inventory and initial analysis of the materials in the Bandelier collection and outlines the potential for this material to shed light on the Late period at Caleta Vitor and the nature of Inka interaction at the site.

Martens, Vibeke (NIKU, Norwegian Institute for Cultural Heritage Research)

[71]

North Norwegian Heritage at Risk

Climate is changing now at an even higher rate than expected in some of the worst-case climate scenarios, with increasing temperatures, changes in precipitation, decreasing permafrost, more frequent and severe storms, sea-level rise, reduction of sea ice, floods, avalanches, and changing vegetation. In the Arctic, the temperature rise is already at 3°C—that is 2° more than the global average and beyond irreparable changes. These changes increase the risks of geo-hazards, e.g., erosion caused by wind, waves, and rivers; landslides; sea-level rise; and permafrost thaw. These changes particularly threaten coastal heritage sites, environments, and landscapes. The Arctic areas are more sensitive because they suffer more from combined threats and have previously been well protected by the aid of permafrost and sea ice. Environmental monitoring equipment installed at sites in the Arctic area through the CULTCOAST research project gives important data on the environmental site conditions and informs about possible threats to continued in situ site preservation. This data bridges archaeology and science and will be presented here.

Martin, Anne-Marie [3] see Menéndez, Lumila

Martin, Debra (University of Nevada, Las Vegas)

[63]

Discussant

Martin, Debra [272] see Baustian, Kathryn

Martin, Debra [7] see Ralston, Clair

Martin, Fabiana (CEHA-UMAG), Dominique Todisco (Université de Rouen), Luis Alberto Borrero (CONICET, Argentina), Manuel San Roman (Universidad de Magallanes) and Victor Sierpe (CEHA-UMAG)

[9]

New Excavations at Fell Cave, South Patagonia, Chile

The work of Junius Bird at Fell Cave played a crucial role in the acceptance of the association between early human populations and megafauna in South America. The evidence for behavioral association of cut-marked bones of American horse, camelids, and ground sloth with hearths, stone, and bone tools is still considered among the stronger proofs of Late Pleistocene arrival to the Magellan Strait area. We recently initiated new excavations at the site as part of a larger geoarchaeological and paleoecological project. This excavation is researching the possibility of previous human settlement at the cave and is concentrated on strata located below the lower occupations identified by Bird. Megafauna bones and a thick layer of a tephra, probably from

Reclús Volcano dated ca. 12,600 BP, were recovered. This possibility is reinforced because a certified tephra from that volcano was recovered on the alluvial plain of the Chico River in front of the cave. The geoarchaeological study of the deposits recovered at the cave together with the description of the local environment during the end of the Pleistocene will produce a new baseline to discuss the human use of the area.

Martin, Fabiana [9] see Morello Repetto, Flavia

Martin, John (Delaware Department of Transportation)

[254]

Learning to Unlearn: Consulting and Working With and Not Dictating To a Community

The Delaware Department of Transportation has a project that will have an adverse effect on two National Register-eligible bridges in south Wilmington through their demolition. This location is within a disadvantaged and predominantly Black community with proud history, as one of the bridges is named for a state legislator from the community. The area has a past of immigrant waves who settled here and worked in the industries of Wilmington that have largely left. The development of an agreement document provides challenges of democratizing the heritage, its focus, recordation, and presentation. The consultation presented a learning opportunity on both sides. When the community was initially asked about their concerns and how the project could provide benefits, the response was largely silence. It was then realized that that approach was novel to them, as the standard practice was to dictate what the agencies thought was appropriate or necessary based on their knowledge and concerns. In addition to reaching an understanding that the community's opinions, experience, and knowledge matter, different consulting party elements also vie for predominance. It is taking time to build trust and understanding and balance the loud voices with input from all.

Martin, Lois (Fordham University)

[29]

Cords of Restraint and Authority: Teotihuacan's Net Jaguars and Technologies of Ensnarement

Recent excavations at the Moon Pyramid in Teotihuacan, Mexico, have uncovered fierce predators—including eagles, pumas, wolves, and rattlesnakes—buried inside. Analysis indicates that many were alive at the time of sacrifice: some in cages, and others bound. Some show evidence of long captivity, including bone deformation from tethers. Many beasts were probably captured and controlled with cords: first hunted with remote-capture snares and nets, and then restrained with rope fetters. Though widely used globally, fiber restraints and string traps are often overlooked, because of their material perishability and physical mutability. Most snares collapse into a limp, amorphous bundle for storage or transport, but stretch into a taut openwork structure when deployed: one that must precisely match the dimensions and strength of the intended target. Western cultural bias favors “hard” weapons over “soft.” But at Teotihuacan, the archaeological record has preserved bindings on both human and animal sacrifice victims, and iconography features knots, interlinked cords, and webs in conjunction with apex predators and paramount figures, signaling the symbolic weight of fiber weapons as powerful instruments. One motif in particular, Teotihuacan's famous Net-Jaguar, faithfully depicts a corded snare, set to entrap this fearsome, exotic, and nocturnal feline.

Martin, Scott [87] see Prado, Shalen

Martin, Simon (University of Pennsylvania Museum)

[11]

Discussant

Martin, Simon (University of Pennsylvania Museum)**[90]***History in the Round: Painted Cylinder Vases as Sources on Classic Maya Society and Politics*

The cylinder vessel paintings assembled in the Kerr Archive cover a remarkable range of themes, with many of the best-known depicting fantastical beasts and other supernatural actors. But a not insignificant portion of the corpus features scenes of courtly performance and, as a smaller subset, dynastic information of the kind we might normally see on carved public monuments. This presentation reviews what we have gleaned from these images and their accompanying hieroglyphic texts over recent years and shows how they are continuing to enrich our view of Classic Maya society and its politics.

Martin, Simon [159] see Beliaev, Dmitri

Martin, Terrance [153] see Hartley, Erika

Martin, Terrance [130] see Schurr, Mark

Martine, Kristen and Emily Palus (US Department of the Interior Museum Program)**[305]***A Future for Archaeological Collections from Federal Policy Perspectives*

Federal archaeological collections acquisition and management practices are guided by decades-old law and policy, intended to uphold aspirational and perhaps unachievable expectations for preserving our nation's heritage. The resulting "curation crises," or, rather, the system that has become the status quo for collections management, is an unsustainable framework. After over a century of collecting with no end in sight, this system cannot persist. It strains limited capacities, finite resources, and dedicated staff, as well as relationships among parties with different objectives, values, and understandings of requirements and responsibilities. This paper explores modernization of collections management objectives and practices, emphasizing shared responsibility, co-stewardship, community partnerships, and increased use. This shift may bring new understanding to the interpretation of our collective history and changes in archaeological practice. Reorienting professional goals and practice and leaning into contemporary ethical standards and stakeholder interests warrants reexamination of why we preserve and how we use archaeological collections and may prompt reassessment of the federal regulations that guide collections management.

Martinet, Adrien (University of Bonn)**[118]***The Usulután Ceramics of Central America: Using Izalco-Usulután Wares to Understand Interregional Relationships and Local Social Complexity*

Usulután wares are ubiquitous throughout Central America during the Late Preclassic period. These ceramics likely originated in eastern El Salvador and quickly spread to neighboring regions of western Honduras, forming the so-called Uapala Ceramic Sphere. Recent investigations suggest that this Sphere covered a larger area than previously thought. It should extend as far as eastern Guatemala, northern Nicaragua, and northeastern Honduras. It also gained in complexity as sub-spheres were identified. Certain sub-spheres produced their own "Usulután-like" wares without much trade from other sub-spheres, suggesting that they were able to maintain stylistic and typological continuity through emulation. The Izalco-Usulután subtype is seen as the apex of Usulután wares. It required technological knowledge and specific qualities of raw materials to manufacture. This complexity lends itself as an indicator for high levels of interaction between communities and allows us to explore their sociopolitical relationships. Its typological focus on serving vessels also links it to feasting practices, which are central to public events and serve as mechanisms of social differentiation. Izalco-Usulután Ceramics are a great tool to further our understanding of the new regions added to the Uapala Ceramic Sphere, both on a local level and in relation to the "core" of the Sphere.

Martinez, April (Institute for Social & Cultural Research [ISCR-NICH]), John Walden (Harvard University), Delmer Tzib (University of Belize), Carlos Quiroz (Ministry of Education, Culture, Science & Technology) and Frank Tzib (Aj Tz'ib)

[226]

Bridging the Gulf: Reconnecting Belizeans to Their Precolonial Heritage through Enhanced Archaeological Education
Belize is rich in cultural diversity and history but has long faced a disconnect between its citizens' knowledge and the profound legacy of its precolonial past. Belize's ancient Maya remains attracts archaeologists from around the world. Despite this extraordinary heritage, some Belizeans are disconnected from this past, leading to a diminished sense of cultural identity and historical consciousness. This presentation investigates the causes of this detachment, revealing a multiplicity of factors, including colonial legacies, socioeconomic disparities, and a limited number of accessible educational resources within schools and communities. The existing curriculum often focuses on recent history, resulting in a generation less familiar with their nation's rich precolonial heritage. The consequences of this disconnect are multiple, encompassing the erosion of cultural identity, missed economic opportunities in heritage tourism, and the marginalization of Indigenous communities. We outline an archaeological education and public engagement plan to help overcome some of these issues and facilitate Belizeans in reclaiming their heritage and participating in safeguarding through education. The case of Belize underscores the global importance of preserving Indigenous heritage and fostering a sense of connection with the past, which, in turn, can contribute to a more cohesive and culturally enriched society.

Martínez, Damián [239] see Robles García, Nelly

Martínez, Ismael [174] see San Roman, Manuel

Martínez, Jorge [306] see Pintar, Elizabeth

Martinez, Maria (Amerind Museum)

[73]

Caring for Ancestors and Their Belongings in Museum Settings

In light of the newly proposed Native American Graves Protection and Repatriation Act (NAGPRA) regulation concerning "Duty of Care," this talk hopes to assist you and your institution (regional or national) to navigate and implement best practices for the curation of historical/ethnographic, archaeological (recent and deep past), and archival Indigenous heritage. I would like to introduce the most current living policies and standards developed and implemented by experts within the field of Indigenous Museology. These resources can provide a foundation for establishing new standards, policies, and practices within and in the spirit of the proposed federal legislation. The second component of this talk will provide examples of shared stewardship practices for the care of and access to Indigenous heritage subject to NAGPRA and beyond (e.g., housing, handling, exhibits, and research). We will explore how research in museum provenance and archaeological provenience, and prioritizing collections access for Indigenous communities, are the most important steps needed to start consultation and engagement for the respectful and meaningful care of Native collections under our stewardship.

Martinez, Patricia (University of York) and Joaquín Arroyo-Cabrales (Laboratorio de Arqueozoología INAH)

[75]

Faunal Remains at the La Playa Archaeological site: Subsistence, Bone Artifacts, Dog Burials, and Bird Bundles

La Playa archaeological site is located at Boquillas Valley, Sonora, northwestern Mexico. Animal remains studied pertain to the Late Archaic / Early Agriculture period (1500/800 BC–AD 200). Their identification

revealed different uses for animals as subsistence, bone artifacts, dog burials, and bird bundles. Although agriculture was important for subsistence, hunting was still a crucial requirement for feeding. There were also some anatomical parts of hunted animals used as bone objects. The sample includes 25 artifacts, allowing the identification of manufacture techniques and possible functions as utilitarian or domestic (corn punches, perforators, smoother, and hammer), ornamental (pins), and votive (associated with a female burial). Dog burials (36 individuals) were also in the same areas but not directly associated with humans. Dogs certainly played an important role, since they received a differential burial treatment than other animals from the site. The estimated heights and body shapes of the La Playa and Arizona dogs are similar to characters known for common Indian dogs. Bird remains utilized for ritual purposes were also found, corroborating their use for several purposes. Ten red-tailed hawk individuals were deposited as bundles and employed for medical rituals. La Playa offered humans a wide range of resources without traveling very far.

Martínez-Candelas, Ilse [259] see Rubio-Cisneros, Nadia

Martínez Donado, Christopher (Museo Nacional de Arqueología y Etnología)

[90]

Las urnas funerarias de la región noroccidental de Guatemala, en la colección del Museo Nacional de Arqueología y Etnología

El ser humano a través del tiempo, ha creado maneras de conmemorar la muerte y recordar a sus antepasados, algunos mediante rituales elaborados y otros por medio de la fabricación de bienes muebles que permiten el tratamiento mortuario de los individuos. En el caso de la región noroccidental de Guatemala, se han recuperado por diversos proyectos, decomisos y donaciones, urnas funerarias provenientes de diversos sitios de los departamentos de Quiché, las Verapaces y Huehuetenango, mismas que han pasado a formar parte de la colección permanente del Museo Nacional de Arqueología y Etnología y que muy rara vez han sido estudiados o publicados, por lo que en esta ocasión se presenta un análisis de iconográfico, estilístico y cronológico de los objetos depositados en la bodega del Museo. Diversos factores han influido en que las piezas en la colección no hayan sido estudiadas a cabalidad, tanto la falta de contexto de algunas de ellas, como la ausencia de los reportes científicos de donde provienen, es por ello que utilizando la iconografía, estudios comparativos y los elementos decorativos se establecerá un estilo característico de la región, aunado a los materiales constitutivos de las mismas.

Martínez-Polanco, María (Universitat Rovira i Virgili / IPHES-CERCA, Tarragona, Spain), Nawa Sugiyama (University of California, Riverside) and Christine France (Smithsonian Museum Conservation Institute)

[222]

Long-Term White-Tailed Deer and Human Relationships in Parita Bay, Panama

A long history of human groups interacting with white-tailed deer (*Odocoileus virginianus*) can be traced to Parita Bay in Panama. Archaeological evidence supports deer consumption since the Middle Holocene, and modern deer are continuously abundant on the Pacific side of the country where Parita Bay is located. When deer skeletal elements show evidence of a C₄ plant-based diet, it is considered a good indicator that maize crops or milpas were present, thus bone and tooth carbon isotopes are useful paleoenvironmental proxies. We sampled 120 δ¹³C carbonate bone and 23 enamel samples to capture environmental change over a long temporal range beginning with the early hamlet agriculture period marked by the introduction of agriculture (circa 6000 BCE) at Cerro Mangote and extending into the time of Spanish contact (1521 CE) at Cerro Juan Díaz. Our results indicate that the deer relied more heavily on C₄ plants, suggestive of extensive anthropogenic environmental alteration, at the beginning of agricultural introduction at Cerro Mangote than in later periods, where large agricultural villages such as Sitio Sierra and Cerro Juan Díaz have been documented. We also compared the δ¹³C carbonate of enamel and bone and found differences in the diet of juveniles and adults.

Martínez-Tagüeña, Natalia (Cátedra CONACYT- DCA- IPICYT), Guadalupe Sanchez Miranda (Centro INAH Sonora), Claudia León (Centro INAH Sonora) and John Carpenter (Centro INAH Sonora)

[75]

Revealing La Playa's Cultural Landscape during the Early Agriculture Period through Paleoethnobotanical Research

This paper presents a reconstruction of the cultural landscape of the La Playa Site in Sonora (SON F:10:3) during the Early Agriculture period (3450–1800 BP). We employ a paleoethnobotanical approach, analyzing 150 macrobotanical samples alongside ethnobotanical investigations, ethnographic data, and oral tradition from the O'odham and Comcaac Indigenous communities. Cultural landscapes represent the amalgamation of human activities, values, and knowledge intertwined with natural features that carry profound symbolic, historical, and social significance, reflecting the intricate relationship between communities and their environments. Our study yields a holistic understanding of past plant utilization for subsistence, aiding in landscape reconstruction and shedding light on archaeological feature functions. The Early Agriculture period in north Mexican archaeology represents the introduction of Mesoamerican crops, reshaping cultural landscapes, impacting diets, fostering interactions among diverse groups, and promoting innovative knowledge and technologies, sedentarism and population growth. Results highlight widespread maize adoption and utilization, along with over 30 different plant taxa, predominantly weedy plants, crucial for subsistence and offering insights into a modified cultural landscape with cultivated fields and irrigation canals. This research enriches our understanding of historical human-environment interactions, providing valuable insights into cultural and agricultural practices during this transformative period.

Martínez Tuñón, Antonio (University at Albany)

[175]

Territorial Strategies in Western Chiapas

This paper explores the different strategies used by a small polity to gain influence in long distance communication routes and access to resources and their changes through time. The research is based on spatial models and an archaeological survey conducted in the southern Mexican state of Chiapas. The survey was performed in an area in between two major archaeological sites, Mirador and Ocozocoautla, with occupations spanning from the Middle Formative (ca. 1000–250 BCE) to the Postclassic (ca. 900–1521 CE). The survey identified 53 archaeological sites in an area that was a border region between the two polities. I contrast four alternative strategies and link them to social processes at different scales, from the local to the macroregional, to understand the political organization of space in non-expansionist political units. The results suggest that prior to any attempt to influence long-distance communication routes the polities needed to exploit the resources in their immediate region.

Martínez-Yrizar, Diana [152] see McClung de Tapia, Emily

Martini, Sarah (Yale University)

[161]

Chair

Martini, Sarah (Yale University) and Dennis Nicolas Lorenzo (Pedro Ruiz Gallo University)

[161]

Enigmatic Early Horizon Occupations: Las Pampas de Panecillo and the Alto Piura

The department of Piura includes a significant portion of the modern national border between Ecuador and Peru and remains understudied archaeologically. Pioneering studies of the Alto Piura in the final decades of the twentieth century introduced the site of Cerro Ñañañique to discussions of the border between the Central and Northern Andes. Beyond this site, however, our knowledge of occupations in this important potential corridor of interaction during the final two millennia BCE remains superficial. In this paper I will review the existing data on the Alto Piura and discuss new excavations at Las Pampas de Panecillo, a non-

monumental site located near the Yapatera River. I will consider evidence of interactions at various scales and explore phenomena that could have resulted in the enigmatic Early Horizon material record recovered including short-term occupations, mobility, and ritual.

Martinón-Torres, Marcos [118] see Campos Quintero, Lina

Martinón-Torres, Marcos [118] see Vieri, Jasmine

Martin-Ramos, Carmen (McDonald Institute for Archaeological Research, University of Cambridge)

[265]

Assessing Hominin Cognitive Evolution through Problem-Solution Distance Modeling: A Case Study Based on Acheulean Technology at Olduvai Gorge (Northern Tanzania)

Stone tool making has proven to be essential in human evolution and evolutionary cognitive archaeology studies (Herzlinger et al. 2017; Martín-Ramos 2022; Martín-Ramos and Steele 2023). In the case of the Acheulean technocomplex, concepts such as innovation, imposition of arbitrary form, and artifact variability have been linked to cognitive traits such as forward planning, spatial intelligence, self-recognition, or symmetry perception. In this sense, the research presented here explored the links between Acheulean tool production and use and hominins' Working Memory Capacity. The examination of the technological strategies employed in the manufacture of Acheulean Large Cutting Tools (LCTs) served as the basis of a problem-solution distance analysis (Haidle 2009; Muller et al. 2017) following Haidle's cognigram methodology (Haidle 2012). Ultimately, this research identified substantial diachronic changes in technological complexity across Olduvai Beds II, III, and IV, thought to have occurred as an adaptive response to the isotropy, shape, and size of the local raw material boulders. This analysis suggests that the cognitive skills of hominins within Bed III were similar to those at Bed II, but that a considerable and likely progressive increase in working memory capacity might have taken place throughout Bed IV.

Martinsson-Wallin, Helene (Uppsala University), Sonia Haoa Cardinali (Fundación Mata ki te Rangi; Uppsala University) and Olaug Andreassen (National Museum of Norway; Uppsala University)

[18]

Sustainable Visit to Rapa Nui: Global Perspectives

In this paper, I present some research results deriving from a collaborative and interdisciplinary research project called Sustainable Visits in Rapa Nui—Global Perspectives. The use of visits refers to tourism, colonization, and migrations in the long-term perspective, visits with colonial connotations, and research visits and Rapanui migrations, all of which have affected the society in social, economic, and ecological ways. The aim of the project is to explore the island from the perspective of island communities and on the terms of the islanders, the Rapanui. I use a lens of globality and problematize such concepts as remoteness, vulnerability, resilience, and survival to understand the effects of these visits. The aim is to learn something from the past to suggest regenerative actions to create social, economic, and ecological sustainable paths forward for this small island in a vast sea. Especially subsequent to European contact time, external interactions, slave raids, introduced diseases, and ethnographic, anthropological, and archaeological research placed the island in a global mindset that affected the local life. In this paper, I especially focus on presenting the results from interview projects on tourism, cultural heritage, and repatriation.

Martirosyan-Olshansky, Kristine [215] see Janzen, Anneke

Martorano, Marilyn**[303]**

Ponderosa Pine Culturally Modified Trees (CMTs) at Great Sand Dunes National Park and Preserve, Colorado: What We Have Learned from 40 Years of Recording, Dating, Analyzing, and Consulting with Tribal Peoples

Ponderosa pine trees with cultural modifications, primarily bark peeling and wood removal, were first officially documented in Colorado at Great Sand Dunes in the late 1970s by the author for her master's thesis. At that time, CMTs were not recorded as cultural resources in Colorado. Since then, several hundred ponderosa pine CMTs have been documented within the park and many hundreds more have been recorded throughout the state. Advances in recordation techniques and dendrochronological analysis have resulted in more precise documenting and dating. The peeling dates for CMTs within the park range from the late eighteenth century through the early 1900s. Research goals have evolved from viewing the trees as individual resources to analyzing their distribution as indicators of how trees were utilized in larger historical landscapes over time. Tribal consultation suggests that numerous groups, including Ute, Apache, and Navajo, utilized these trees for food, medicine, building materials, tools, cradleboards, adhesives, and waterproofing. In partnership with tribal consultants, the park has created strategies to preserve and protect the CMTs and interpret these unique resources to visitors. A newly created visitor center exhibit includes a peeled tree with information about the tree peelers and how/why trees were modified.

Martos Nieto, Miriam (Universidad Pablo de Olavide), Bethany Aram (Universidad Pablo de Olavide) and Gonzalo Carlos Malvarez García (Universidad Pablo de Olavide)**[222]**

The Indigenous Worldview of Water in the Isthmus of Panama

The rivers are natural limits to many cultures between the knowing and unknowing worlds. Also, they were the border between different territories and a fundamental element in establishing a settlement in a place or not. The names of the rivers are remains of these aspects. A historic-archaeological and ethnographic study of the river's toponymy provides an approach to the indigenous Panamanian worldview and deepens the colonialism process of the Isthmus.

Martyneec, Richard (Independent Researcher) and Sandra Martyneec (Independent Researcher)**[88]**

Two Examples of Recent O'odham Participation in Archaeological Projects in Southwestern Arizona

The application of archaeological strategies in conjunction with traditional knowledge has produced unprecedented results from recent projects conducted in southwestern Arizona and northwestern Sonora, Mexico. The Hia C-ed O'odham have occupied this area since at least AD 1300/1400, and probably much earlier. This paper offers examples from two ongoing projects that have benefited from interaction with O'odham individuals and organizations. First, Hia C-ed O'odham elders have mentioned the use of traditional routes by tribal members between villages at Quitobaquito and Dome, Arizona. It is also known that rituals in the Sierra Pinacate were performed along the way. Unfortunately, both the nature of the rituals and the exact locations have been forgotten. However, based on interviews and archaeological surveys the location has probably been identified and awaits verification. The second example will involve an examination of the site of Hótunikat (Sunset Camp) in the Sierra Pinacate. This site was abandoned in 1850 because of yellow fever and the Vikita ceremony was moved to Quitovac, Sonora, Mexico, at that time. Different versions of this ceremony have been documented and are the focus of studies by Tohono O'odham tribal archaeologists who, in turn, are consulting with local archaeologists and knowledgeable tribal members.

Martyneec, Sandra [88] see Martyneec, Richard

Marwick, Ben [173] see Poole, Anne

Mascarenhas, Shannon (IAC, LLC) and Roxanne Pendleton (IAC, LLC)**[224]***Exploring Precontact Pithouse Features and Artifact Assemblage at the Amoskeag West Bank Site*

This paper presents the results of analysis conducted using lithic and ceramic artifacts from the Amoskeag West Bank site (27-HB-079) in Manchester, New Hampshire, focusing on the evidence for a pithouse feature uncommon in the regional archaeological record. A targeted data recovery by IAC in 2022 yielded an assemblage of 961 precontact Native American artifacts, including several diagnostic specimens.

Archaeologists also documented an array of hearths, post holes, and pits within and around a large downcutting feature consistent with a pithouse rarely seen in northern New England. Datable artifact types and organic material from several features indicate occupation during the Woodland and Archaic periods, with preliminary evidence for a Paleoindian component. This presentation focuses on the data that indicate the presence of a pithouse, the associated cultural features and artifacts, and how the current data can inform on human behavior at a site with temporally distinct cultural deposits from across the precontact era.

Masia, Dineo Puseletso [162] see De La Peña, Paloma

Mason, Austin (Carleton College)**[257]***Teaching Cultural Complexity through Experimental Archaeology of Composite Artifacts*

Experimental archaeology is an inherently interdisciplinary field that fills gaps in our knowledge about the past by practically testing the production and use of material culture through collaborations between academics, skilled craftspeople, museum curators, and public historians. Similarly, the material culture of most societies is “interdisciplinary” in that many things are produced not by a single craftspeople, but by communities of people who pass on production techniques, engage in trade, and work collaboratively to combine multiple materials and specialty skills into complex, composite artifacts. This paper discusses a pedagogical approach to teaching experimental archaeology as a series of linked units that deconstruct composite artifacts and processes in order to better understand the complexity of past lived experiences. The case study undergraduate course, taught in 2021, revolved around the central question: “How much (and what type of) work was required to make an English woman’s outfit ca. 550 CE?” To answer it, weekly lab experiments investigated spinning and vegetable-dyeing wool (for yarn), green woodworking (for building a loom), pottery formation and firing (for ceramic loom weights), weaving on a loom (for cloth) and tablets (for trim), and bronze casting (for brooches). The resulting historical understanding was greater than the sum of these parts.

Mason, Owen (INSTAAR University of Colorado)**[307]***Restructuring the Occupation of Near Ipiutak/Norton at Point Hope: Sedentism, Warfare, and Whaling at Point Hope?*

Archaeological discourse can remain in thrall to classificatory and theoretical constructs. “Near Ipiutak” was framed by Larsen and Rainey in 1948 within the penumbra of the hundreds of Ipiutak ruins, <1 km distant, that resulted from an aceramic, non-whaling habitus and aestheticized mortuary practice. In the monograph *Ipiutak and the Arctic Whale-Hunting Culture*, the two cultural matrices offered a contrast of “primitive” and inferentially evolved characteristics: Ipiutak, the presumed ur-kultur, had to precede its successor, Near Ipiutak, whose ceramic, slate use, and whaling were complexity-emergent properties. This view of Near Ipiutak is increasingly shopworn as recognized by Larsen in 1982, who relocated within Norton. Reanalyses of the legacy text further refine the sequence and calibrated ¹⁴C ages between 100 BC and AD 300 establish that Near Ipiutak preceded Ipiutak by more than 300 years. Revising the prior cursory discussion, Near Ipiutak at Point Hope is more significant: including a fifth of the graves, several houses, and extensive midden, providing well-contextualized, dated evidence for warfare, not previously emphasized. Whaling remains inferential, based on two whaling harpoon heads within graves, with middens lacking archaeofauna. Likely, Ipiutak developed in situ from Norton ancestry, reoriented toward the interior, forswearing pottery and whaling for caribou.

Mason, Owen [307] see Taieb, Juliette

Massey, Sarah (Independent Researcher)

[117]

Monumental Architecture on the South Summit of Cerro Tajahuana, Ica Valley, Peru

Proyecto de Investigación Arqueológica Tajahuana conducted excavations at two unique buildings located on the south summit of the Paracas site of Cerro Tajahuana in the Ica Valley, Peru. The larger of the structures, often referred to as a fortress, was built along the edge of a steep ravine above two large groups of figurative geoglyphs and isolated figures corresponding to the Late Paracas-Initial Nasca occupation of the site.

Excavations do not support a defensive interpretation for the buildings. A distinctive pattern of closed architecture that includes walled patios and exterior spaces, interior rooms with tall walls connected by stairways and ramps was identified. It contrasts with the open, stepped platform mounds and plazas present on the north summit. The unusual configuration of these buildings and corresponding artifact assemblages suggests their use in private, closed rituals. Close proximity to large areas of complex figurative geoglyphs reinforces a ceremonial interpretation for the structures. AMS dates and associated pottery collections suggest they were in use between 500 and 200 BC, a period spanning the Middle and Late Paracas phases.

Massigoge, Agustina [200] see Gutiérrez, María

Masson, Marilyn (University at Albany SUNY)

[32]

Chair

Masson, Marilyn (University at Albany SUNY), Carlos Peraza Lope (Centro INAH Yucatán), Bradley Russell (State Historic Preservation Office, Albany, NY) and Timothy Hare (Morehead State University)

[32]

Ambivalence and Apostasy at the Sixteenth-Century Visita Town of Hunacti, Yucatán

Archaeological investigations of three Maya elite houses and a visita church at Hunacti reveal the mixed material signatures expected of a community deeply ambivalent to Spanish rule, strongly attracted to and at the same time repulsed by Spaniard house styles, Christian doctrine, and European goods. In a rural location at a distance from Franciscan centers of power in the mid-1500s, and near to the frontier (*montaña*) inhabited by free Maya people, Hunacti is renowned for acts of apostasy in historical accounts. Yet colonial Hunacti was grandly built, attesting to a wealth of masons and ambitious intentions of Maya lords and Franciscan parties. This paper examines the emulation and transformation of selected aspects of Spanish material culture by visita residents. Other institutions were rejected in favor of reproducing prehispanic institutions of everyday life and belief.

Masson, Marilyn [42] see George, Richard

Massullo, Brandon [333] see VanPool, Todd

Masur, Laura [268] see Backs, Haylee

Masur, Lindi (McMaster University) and Giles Morrow (Vanderbilt University)

[30]

Life, Death, and Renewal: The Collective Experience of Performative Ritual at Huaca Colorada

Sector B, the principal monumental area of Huaca Colorada, has long been understood as the locus of rites of social and cosmic rebirth, ancestor veneration, and genealogical continuity. Excavation has revealed a ritual canon that included the construction of ceremonial platforms that staged elaborate mortuary rites, including feasts and the sacrifice of nonhuman plant and animal kin. In contrast, occupation areas found in Sector A to the northwest were previously considered to represent domestic and informal use spaces. Recent excavations of Sector A have revealed a surprising and deep palimpsest of architectural features including additional ceremonial platforms and a chamber-tomb with several impressive musical instruments. Dedicatory human offerings, primarily of pregnant women, infants, and children, were similarly followed by the ritual termination and destruction of these platforms. Furthermore, subsequent architectural renovation and social renewal in Sector A draws meaningful new parallels with Sector B for interpreting these rites. In this paper, we take a holistic approach to the consideration of Andean life cycles—birth, reproduction, and sacrifice of human and nonhuman kin, including the huaca itself—and the collective experience of acts of renewal in the maintenance of social and cosmic order.

Matadamas-Gomora, Diego (Tulane University)

[79]

Chair

Matadamas-Gomora, Diego (Tulane University), Jason Nesbitt (Tulane University), Rodolfo Aguilar Tapia (Proyecto Templo Mayor, INAH), Leonardo López Luján (Proyecto Templo Mayor, INAH) and Tatsuya Murakami (Tulane University)

[218]

Compositional Analysis of Obsidian Artifacts from the Great Temple of Tenochtitlan Using pXRF

Compositional analyses are fundamental in modern archaeological research. Recently, the introduction of portable X-ray fluorescence (pXRF) equipment has motivated an even greater interest in integrating chemical composition and provenance studies of raw materials as one of the primary objectives in archaeological projects. Obsidian is one of the most intriguing raw materials for provenance studies; its homogeneous composition and ubiquity in the archaeological context make it perfect for studying procurement processes and technological innovation in complex societies. In the case of the sacred precinct of Tenochtitlan (the capital of the Aztec Empire), there was no quantitative data about the different types of obsidian procured by this urban center. This study involves the analysis of 814 obsidian artifacts in two levels: a diachronic one, based on a sample that encompasses a long period of Aztec history (ca. AD 1375–1502), and a contextual one, based on the type of context where the artifacts were found (offerings and constructive fill). The data collected shows the frequencies and variations for specific kinds of obsidian through time and the preference for particular colors and qualities for the production of ritual and non-ritual objects.

Matadamas-Gomora, Diego [79] see Marín Calvo, Antonio

Mataloto, Rui [170] see Lewis, Brandon

Mataloto, Rui [26] see Williams, Joey

Mathews, Darcy [133] see Maurice-Hammond, Isabelle

Mathews, Jennifer (Trinity University, San Antonio)

[194]

Chair

Mathews, Jennifer (Trinity University, San Antonio)**[194]***From Food of the Gods to Avocado Toast: Bringing the Mesoamerican Avocado to California in the Nineteenth Century*

The earliest avocados of the Americas were so prized by the Olmec, Maya, and Aztec peoples for their rich caloric content and buttery flavor that they were portrayed in iconography on king's tombs and used as place-names for ancient cities. During the colonial period, the Spanish used the fruit as food for enslaved people on sugar plantations across their land holdings. However, in the early nineteenth century, the US Consul brought avocados from Campeche, Mexico, to Florida, and by the mid-1900s seedlings were transported from Nicaragua and Mexico to California. This started a trend of foreigners bringing avocados in various forms to California, although their popularity was hindered by their poor survival rate due to annual frosts. Using archival sources, family histories, and informant interviews, this paper will discuss the role that Southern California nurseries, "gentleman farmers," and amateur horticulturists played in ultimately establishing the crop in California in the nineteenth and early twentieth centuries, setting the stage for today's avocado obsession in the United States.

Mathews, Jennifer [68] see Arroyo, Valerie

Mathews, Jennifer [99] see Sammons, Claire

Mathieu, Elisa (University of Namur; Université Libre de Bruxelles)**[105]***Student Contributions to International Collaboration in MIA Cases: A Personal Case Study*

Investigating archaeological sites related to the recovery of MIAs from past conflicts requires international collaboration among various agencies and civilian volunteers. I graduated in 2023 as an art history and archaeology student at the University of Namur (Belgium). I served as an archaeologist and French translator on two different DPAA missions (Belgium and France), where I was able to apply theoretical knowledge and the fundamentals of archaeology that I learned during the course my degree. As a student volunteer, I benefited from those collaborative experiences and grew professionally through the practical application of historical and archaeological research and field methodologies (survey, mapping, excavation, life support equipment/material evidence processing, chain-of-custody documentation). As the site translator, I facilitated communication between the lead archaeologist and local stakeholders to ensure understanding between all parties. Students can contribute to the educational experience of both civilian and veteran volunteers on DPAA projects by bringing fresh perspectives and aiding in the use of technological innovations to help tell the stories of MIAs. Although this period of history may seem long ago to many students, we can all feel empathy, no matter our background, because these recovery efforts are all about our promises to people.

Mathiowetz, Michael (Getty Research Institute)**[11]***Discussant***Mathiowetz, Michael (Getty Research Institute)****[252]***The Aztatlán-Huasteca Network: A Model for the Acquisition and Dissemination of Scarlet Macaws from Mesoamerica to the US Southwest/Mexican Northwest*

In the long-running debate on the nature of interaction between societies in prehispanic Mesoamerica and the US Southwest/Northwest Mexico, the acquisition of scarlet macaws and their dissemination to the SW/NW has been perplexing. Questions abound as to how and why long-distance social networks were established and sustained to facilitate the northward movement of these tropical birds over thousands of kilometers between AD 900 and 1450. Who acquired scarlet macaws? How were they transported? What routes did these birds and their carriers traverse? Two decades ago, John Pohl proposed that an ideology of Seven Flower-Xochipilli—a solar deity linked to scarlet macaws, flowers, and maize-agricultural fertility—may have appealed to SW/NW people and spurred their interest in acquiring scarlet macaws, a hypothesis that

has been substantiated by the author in recent years. Mimbres (late AD 1100s) and Casas Grandes (AD 1200–1450) people bred scarlet macaws, and genetic studies indicate that these birds derived from wild populations around the broader Guatemala, Campeche, Chiapas, and Veracruz border region. I propose the existence of a ritually scheduled cross-continental route traversed by Aztatlán core-zone cargo holders that intersected with Huastecan networks, a corridor by which macaws and associated ideas were then transmitted northward via west Mexico.

Mathiowetz, Michael [34] see Snow, Meradeth

Mathu, Patricia (University of Alabama) and Katherine Chiou (University of Alabama)
[202]

Macrobotanical Analysis of Archaeological Excavations at the Moundville (1Tu500) Riverbank

This project looks at plant remains from an archaeological site, Moundville (1Tu500), in the Black Warrior River Valley of west central Alabama. Over centuries of occupation (AD 1020-1650), the people of the Black Warrior River Valley experienced profound changes in population size and social organization. Signatures of past peoples co-mediating demographic and political changes may be visible archaeologically in plant remains. For this research project, I analyzed macrobotanical remains, such as seeds, nuts, and other plant remains visible to the naked eye, collected during the 2017, 2018, and 2019 field seasons at the northernmost periphery of the site. Exploring changes in plant use over time helps disentangle plant-related activities and gain insight into the past lives of people at Moundville. I identified taxa presence, abundance, and density, and compared my work to previous work that was completed in the region during the 1980s and 1990s. New theoretical lenses and improved recovery techniques demand refreshed scholarship on the site's food systems and human-plant interactions.

Mathur, Ryan [121] see Powell, Wayne

Mathwich, Nicole (San Diego State University)

[2]

Chair

Mathwich, Nicole (San Diego State University) and Isaac Ullah (San Diego State University)
[260]

Missions, Herds, and Habitat: Analyzing Livestock Dynamics in the Desert Pimería Alta

The Columbian Exchange reshaped ecosystems and societies across the Western Hemisphere, and the Pimería Alta (today Sonora and Arizona) was no exception. The establishment of Spanish colonial missions in the Pimería Alta region beginning in 1687 marked a pivotal moment, catalyzing the beginning of livestock ranching. This presentation delves into the rapidity of the spread of cattle, sheep, and horses in the Pimería Alta, highlighting their lasting influence. Focusing on zooarchaeological data derived from mission contexts, this presentation focuses on the temporal and demographic herd dynamics. Comparative analysis of precontact and postcontact faunal remains reveals the swift integration of Eurasian domesticates into local diets within a few decades of contact. These changes were never completely accepted, and historical records show how Indigenous resistance in the region impacted herd size and growth. Using agent-based modeling, we examine possible habitat impacts and scenarios to evaluate the effects of Indigenous raiding on herd growth. The transformation of landscapes through grazing practices and the permanent alteration of local dietary patterns are all legacies of these colonial-era animal introductions. Careful consideration of the dynamic relationship between herd and desert habitats helps reveal the impact and scope of the colonial introduction of livestock.

Mathys, Aurore [37] see Lemaitre, Serge

Mathys, Aurore [188] see Wauters, Valentine

Matney, Timothy [45] see Marino, Maeve

Matney, Timothy [169] see Richardson, Sarah

Matsumoto, Go (Yamagata University) and Gabriela De Los Ríos (PIA Paisajes Arqueológicos de Pañamarca)

[239]

The Lambayeque Political System Viewed from the Lidar Map of Sicán Archaeological Complex

Lambayeque refers to the late prehispanic archaeological culture that emerged after the political demise of the preceding Moche Culture and reached its height of prosperity during the late tenth century, centering on a large city called Sicán on the Peruvian north coast. The Lambayeque Complex Archaeological Project (PIACL) has carried out research in and around the city since 2016. Previous research on this site, including ours, have focused primarily on its ceremonial core that consists of monumental mounds once called the “Batán Grande Group.” We have not paid equal attention to other miscellaneous mounds and residential zones that are thought to have extended further in all four directions. Thus, our view of the site, and inevitably of the society as whole, has relied heavily on research with an overemphasis on monuments. As the first step to solve this problem, in 2022 we carried out a 3D mapping of the site using the lidar SLAM and aimed to define the site extent and to clarify the architectural components, which have never been clear. We expect that the spatial configuration of the site revealed by this mapping project will provide important clues for examining the political system of the Lambayeque society.

Matsumoto, Mallory (University of Texas, Austin)

[128]

Sacred Surfaces: Reed Mats in Classic Maya Writing

Archaeological, ethnohistorical, art historical, and ethnographic evidence attests to extensive use of reed mats over millennia across the Maya region. In addition to being used for sleeping or sitting atop benches or floors, mats partitioned space within the built environment, wrapped the bodies of the deceased for burial, or covered the thrones of queens and kings. Small segments of reed mat often adorn the accoutrements or bodies of members of dynastic courts. Mats were, in other words, ubiquitous in Classic Maya life, even if their physical remains are comparatively rare in archaeological excavations. This paper focuses on cross-media evidence of reed mats among the Classic Maya; namely, a small corpus of hieroglyphic texts arranged in an interwoven, mat-like format. This highly unusual layout was not only more sturdy than the reed original but highly restricted in time and place, in striking contrast to its quotidian counterpart. I argue that the practice of writing hieroglyphs in an interwoven format was a visually salient expression of the texts’ ritually activated surfaces. Woven writing, in other words, transmitted the ritual function associated with mats by replicating their structure in durable form.

Matsumoto, Naoko, Atsushi Iriki (National Institute of Physical and Chemical Research) and Saburo Sugiyama (Okayama University)

[239]

Theory, Strategies, Objectives, and Preliminary Results of Transdisciplinary Studies of Ancient Consciousness on Time and Space out of Eurasia

Ancient consciousness may be a key concept to discern human biocultural evolutionary processes. We reassess how indigenous people out of Eurasia developed consciousness about time and space and created conceptual dividing apparatuses, like calendar systems. We begin with theoretical backgrounds to introduce our underlying triadic (ecological, neural, cognitive) niche construction model and present the specific objectives and strategies applied. The papers of this symposium derived from our ambitious five-year program “Integrative Human Historical Science Out of Eurasia: Exploring the Mechanisms of the Development of Civilization,” in 2019. After

the COVID-19 shutdown that delayed our field/laboratory work, one of our sub-programs, “Development of artificial niche construction and cognition of time and space,” began gathering original data of monuments, cityscape, landscape, and skyscape among the ancient societies established in the Mexican highlands, northern Peru, Micronesia, and Japan. We improved strategies to map materials of complex societies using total station, lidar, 3D scanners, or photogrammetric devices. We here present the preliminary consequences of the ongoing mapping projects and discuss our transdisciplinary studies. In some cases, we apply the data to an archaeoastronomy program we developed, to discuss how communities acquired cognitive mechanism to further develop their capacities and biocultural evolutionary processes.

Matsumoto, Yuichi and Yuri Caverio Palomino (Universidad Nacional Mayor de San Marcos)
[299]

After Monumentality: The Late Paracas Component at the Site of Campanayuc Rumi in the Peruvian South-Central Highlands

Campanayuc Rumi, located in the Peruvian south-central highlands, flourished as a major ceremonial center during the late Initial period and early Early Horizon (ca. 1000–500 BCE). While it ceased to function as a Chavin-related center and an important node of interregional interaction around 500 BCE, the ceremonial core was transformed as a domestic occupation and Middle/Late Paracas-related materials are associated with it. Considering that Campanayuc Rumi is located quite far from the core area of the Middle/Late Paracas Culture (ca. 500–250 BCE) in the south coast, the coexistence of local cultural traditions and Paracas material culture after the collapse of the Chavin Interaction sphere allow us to better understand the entanglements of local differences and widespread commonalities between the south coast and south-central highlands. This paper examines the nature of Middle/Late Paracas component at Campanayuc Rumi where the local style domestic constructions were placed on the ceremonial core ca. 500 BCE and new monumental construction project was not carried out though Paracas style pottery was continued to be utilized in the context of votive offerings.

Matt, Ira (Confederated Salish and Kootenai Tribes)
[144]

Discussant

Matthew, Laura
[11]

Discussant

Mauney, Mary Kate (University of North Carolina, Greensboro)
[43]

“Fire and Be Damned”: An Analysis of Lead Bullets from Alamance Battleground State Historic Site (31MR397)

The Regulator Rebellion, a 14-year conflict between corrupt colonial powers and backcountry residents seeking governmental regulation, has been the subject of scholarly debate, the focus of numerous books and articles, and the inspiration for famous works of fiction. Despite academic and public intrigue, research on the Regulator Rebellion has been limited to the analysis of historical documents and accounts with little attention paid to the archaeological remains associated with events of the rebellion. The work presented in this poster seeks to rectify the lack of archaeological analysis surrounding the Regulator Rebellion through an artifact analysis of lead bullets recovered from Alamance Battleground. This poster seeks to answer the question: how can lead bullets found at Alamance Battleground provide new insights into the battle such as the location and emotional state of social actors?

Mauran, Guilhem [162] see De La Peña, Paloma

Maurice-Hammond, Isabelle (University of Victoria) and Darcy Mathews (University of Victoria)**[133]***Getting to the Root*

Estuarine root gardens are poorly understood and under-researched sites of Indigenous plant cultivation on the Northwest Coast of North America. Combining archaeology, ecology, and pedology, and drawing from research conducted on 'Namgis and Ahousaht First Nations territories in British Columbia, Canada, this research proposes a novel method to aid in the identification of these gardens. Further, we provide an overview of how this method was successfully deployed to identify a root site that was no longer known by community in Songhees First Nations territory. Based on the success of this methodology, we argue that these sites, as important and often still functioning cultural landscapes, are in need of better recognition and protection by cultural heritage practitioners and legislation in coastal British Columbia. Further, this research highlights the ways in which archaeology remains complicit with colonial systems of power, which can only be rectified by centering Indigenous voices.

Mauricio, Ana (Pontificia Universidad Católica del Perú)**[243]***Comunidad y arqueología en el Valle de Chao: Conversando desde las escuelas*

Este trabajo presenta una revisión breve pero comprensiva de la historia prehispánica, colonial y republicana del valle y distrito de Chao (Costa norte de Perú) y discute la relación entre esta historia y el contexto social y económico actual del distrito. Este análisis busca entender la relación entre los pueblos asentados en este valle y el patrimonio arqueológico de esta región, es decir, su conocimiento, percepciones y expectativas. Este análisis ha sido la base para los trabajos que se han desarrollado con algunas escuelas del distrito buscando establecer una comunicación entre la investigación arqueológica y las comunidades. Esta presentación entonces, también analiza el impacto y resultados de este trabajo y el futuro del mismo en el contexto socioeconómico actual de este distrito.

Maxwell, David (Simon Fraser University)**[100]***Are Online Courses Less Engaging Than Traditional Lectures? A Comparison of Student Results from Different Presentation Formats*

ARCH 100 is a “breadth” course, providing a social sciences credit for students from across Simon Frazier University. Fall semester 2022, I taught sections of this course as both online asynchronous (OLA) and traditional in-class lectures. Both sections offered identical lectures and readings while employing identical multiple-choice exam formats, both written online drawing from the same question banks. Simultaneously teaching two versions of the same course provided the opportunity to compare student results using two different presentation methods, while holding most other variables constant. After teaching this course some 30 times, I expected mean class scores between 74% and 78%, typical for the class. Surprisingly, the in-person mean was 65.8%, compared to 73.5% in the OLA version. These unexpected results suggest at least three possible explanations: (1) online courses are more likely to appeal to students who are self-motivated, (2) my teaching methods were more different between the two classes than I anticipated, and (3) there was substantially more cheating involved in the OLA course than in the in-person course. I explore each of these potential (and not necessarily mutually exclusive) explanations.

May, J. (Schiele Museum of Natural History), Martha Gimson (University of North Carolina, Charlotte) and Robert Crisp (Schiele Museum of Natural History)**[44]***Holly Bend Plantation 2022: Search for the Kitchen Hearth, Ceif Cabin Site, and Dependencies*

Past documents describing the principal family residing at Holly Bend, the architecture, commerce, and social networks don't mention an African American component. That is until 2015 when identified colonowares

were linked with African American makers at other North Carolina plantations. Additionally, in 2017 ceramic tobacco pipe fragments were examined and associated with the separate kitchen where African Americans were preparing meals for Robert Davidson's family. Photographs from the early 1970s have been examined for specific locations of the kitchen and possible tenant/slave cabin. Reanalysis of brick fragments from earlier excavations are examined to more precisely locate the kitchen hearth and cabin site hearth and correlate with known African American artifact types.

May, Keith [141] see Aitchison, Kenneth

May, Rossana (Kaxil Kiuc AC), Tomás Gallareta Negrón (INAH Yucatán Mexico) and William Ringle (Davidson College)

[261]

Location, Location, Location: An Economic and Social Approach to Stone Houses in the Ancient Puuc District of Bolonchen, Yucatán, Mexico

Domestic architecture in the Puuc Hills shows an unusually high incidence of vaulted buildings, often considered to be the residences of higher status community members. The factors guiding their placement within communities are understudied, however. This is unfortunate since the siting of such expensive stone houses with respect to the built and natural environment is highly informative with regard to the social composition of settlement units and their main economic activities. This report summarizes our attempt to understand these factors in the southeastern Distrito de Bolonchen using a combination of intensive fieldwork and GIS analysis. Our ability to study domestic architecture in the eastern Puuc is now much improved thanks to lidar coverage of the region, coupled with extensive ground survey, permitting identification of a variety of domestic forms. Perhaps the most important factors dictating house location are the limestone outcrops or "altillos" and cone karst hills that provided construction surfaces, building materials as stone and sascab; besides, their contours can be used to define coresidential units. In addition, features related to the main economic activities performed by households, such as quarries and kilns, as well as nearby cultivable land, can also be used to differentiate larger settlement units.

May, Rossana [261] see Bey, George III

May, Rossana [261] see Gallareta Cervera, Tomás

May, Rossana [261] see Seligson, Ken

May, Rossana [261] see Winters, Kyle

May, Sally (University of Adelaide), Joakim Goldhahn (University of Western Australia) and Gabriel Maralngurra (Injalak Arts)

[156]

Rock Art: A Biographical Perspective from Western Arnhem Land, Australia

In recent decades, studies of contact rock art have significantly contributed to rock art research globally. A key reason for this is that such artworks can represent a reverse gaze across cross-cultural encounters. Another reason is that contact rock art affords us neatly chronological points of time, before and after colonial engagements with First Nation societies. A common thread for such research is that it views contact rock art from a cultural-historical perspective but what happens if we move beyond such cultural perceptions and perceive contact rock art from a biographical perspective? In this presentation, we will use known rock art artists in western Arnhem Land, their lives, artworks, and biographies to explore how this is reflected in their rock art.

May, Sally [156] see Brady, Liam

May Castillo, Manuel (Universidad Carlos III, Madrid)**[21]***Legally Nullius: How Colonial Discourses Underpinned Juridical Concepts Still Influencing Heritage Laws in Mexico*

In this presentation, I argue that paganism-barbarism not only amalgamated colonial propaganda to portray the Maya Peoples as enemies of the crown for the sake of colonization but also served to legally disable any Maya who dared to claim their rights before the Spanish Crown. Such legal disabling allowed the dispossession of their ancestral territories, the disruption of their spiritual relations with the land, and the imposition of a model of anthropocentric domination of land that impacts even the modern states' laws. This presentation aims to engage in a critical conversation about the influence of such colonial legal relics on heritage practice in Mexico.

Mayer, John [189] see Boudreaux, Sarah

Mayes, Arion (San Diego State University)**[69]***Bioarchaeological Evidence of Occupational Stress and Specialized Task Activity at Spiro Mounds, Oklahoma*

The archaeological site of Spiro Mounds was a ceremonial complex with an associated village of artisans and priests. Located on the Arkansas River, a tributary of the Mississippi River, the site is situated in a natural corridor between the Southeast, the Plains, and the southwestern United States. Long considered a quintessential Mississippian site (AD 1000–1450), this, one of the wealthiest of the Southeast complexes, was strategically placed as a cultural gateway. Through a detailed bioarchaeological analysis, individuals from Spiro Mounds are examined for evidence of occupational stress. Although there is an emphasis on high-status burials interred at Spiro Mounds, certain individuals exhibited osteological and dental changes due to activities exhibiting identifiable signatures of specific task-related processes. Here, the focus is on a suite of dental and skeletal changes that, elsewhere, have been attributed to basket weaving.

Mayeux, Camille [307] see Taieb, Juliette

Mayfield, Tracie (University of Southern California)**[297]***Native Raizal Heritage: Landscape Utilization and Cultural Patrimony on Old Providence and Santa Catalina Islands, Colombia (1629–Present)*

The islands of Old Providence and Santa Catalina, located 130 miles off the coast of Nicaragua and around 8.5 square miles in size, have been a center of global trade, resource extraction, and military action since 1629, when the English Puritan venture capitalists of the Providence Island Company—whose shareholders also held stakes in the Virginia Company—financed the primary colonization of Old Providence and Santa Catalina in 1629, one year after the founding of the Massachusetts Bay Colony in what was to become the United States of America. Slaves were initially brought to the islands in 1633, and in 1638 those slaves, with the assistance of Maroons who were living on the southwest side of Old Providence Island, staged the first revolt in the English Americas. The islands are still occupied by descendants of the original English Puritan colonists, enslaved Africans, and self-emancipated Africans, who established a coterminous Maroon colony that included peoples of Indigenous and European descent fleeing the colonial industrial complex, and who now identify collectively as Raizal. In her presentation, Dr. Mayfield explores Native Raizal heritage—both tangible and intangible—through the lens of enduring forms of landscape utilization and discrete types of cultural patrimony.

Mayfield, Tracie [267] see Besaw, Courtney

Mayhew, Melanie (State Museum of Pennsylvania)**[317]***Where There's a Weir, There's a Way*

Pennsylvania has over 80,000 miles of streams and rivers. A project by the author to identify V-shaped stone fish weirs in this state has yielded over 280 structures using an array of data sources. Many of these weirs occur on the Susquehanna River and its tributaries, which drain into the Chesapeake Bay. This river is North America's longest non-commercially navigable waterway, and it supported a large fishing industry prior to the construction of hydroelectric dams during the early twentieth century. This presentation will focus on the identification of weirs in Pennsylvania using remotely sensed imagery and historic documentation. The author will discuss data sources, the development of naming conventions, structure attributes, and their strategy for recording resources in Pennsylvania's State Historic and Archaeological Resource Exchange (PA-SHARE). Data resulting from this research can help reveal archaeologically significant areas, support the locations of historically referenced settlements, inform fishery biologists in restoration efforts, and provide a visual reminder of our rivers' historic value.

Mayo, Carlos, Julia Torné Mayo (Fundación El Caño / SNI), Alfredo Campos (Universidad Tecnológica de Panamá), Eliecer Ching (Universidad Tecnológica de Panamá) and Hannah Fernández (Universidad Tecnológica de Panamá)**[42]***Long-Distance Exchange of Emeralds in the Isthmo-Colombian Area*

A group of translucent green stones have recently been found in the archaeological site of El Caño, Panama. It is not the first time that these types of stones have been found in the region. Stones with similar characteristics were found at Sitio Conte in the 1930s. The analyses carried out with pXRF in combination with spectroscopic techniques (FTIR, UV_Vis_NIR, photoluminescence) on the samples from El Caño confirm that the stones are emeralds, and their geochemical fingerprint suggests that they come from Colombia, probably from the Muzo region. In this paper, the type and possible exchange routes are evaluated with the help of written texts, archaeological contexts, and traceology. Three possible routes through exchange networks are proposed, through the Magdalena River, the Cauca River valley, or the Pacific coast from the chiefdoms of the La Tolita-Tumaco culture.

Mayo Torné, Julia**[42]***Preliminary Results of the Physico-Chemical Analysis and Manufacturing Traces of the Tesserae Mirrors from El Caño, Gran Coclé Archaeological Tradition (750–1020 CE)*

The study presented below aims to determine whether the mirrors of pyrite tesserae and iron ore tesserae not associated with bases, found at El Caño, are of local production or, on the contrary, came from Mesoamerica given their formal and material resemblance to those from that area. In order to achieve this objective, firstly, a formal typological classification of the mirrors according to their attributes, a characterization of their materials by means of optical microscopy techniques (thin slides and crossed nicols), X-ray fluorescence spectrometry (XRF) and energy dispersive spectrometry (EDS), and a characterization of the micro-traces or traces of manufacture present in the mirrors through refraction transformation imaging (RTI), secondary and electro-sprayed electron detection (SE/BSE), and digital microscopy. Preliminary analysis indicates that while some mirrors and tassels may be of foreign origin, most appear to be of local manufacture, suggesting that the people of El Caño produced their own mirrors inspired by Mesoamerican mirrors with which they share not only formal, but probably also conceptual aspects.

Mayo Torné, Julia**[157]***Discussant*

Mayo Torné, Julia [42] see Mayo, Carlos

Mayoral, Roxanne, Teegan Boyd (California State University, Los Angeles), Michele Bleuze (California State University, Los Angeles) and James Brady (California State University, Los Angeles)

[221]

Beneath the Surface: Analyzing the Significance of Maya Cave Taphonomy in the Preservation of a Commingled, Fragmentary, Skeletal Assemblage

Cueva de Sangre is a 3.5 km cave that is a highly complex, multi-cave system in Dos Pilas, Petén, Guatemala, that includes riverine environments and seasonally inundated passages as well as dry areas. Use of the cave has been dated ceramically from the Late Preclassic to the Terminal Classic (400 BC–AD 800). This study examines the varied taphonomic processes of a fragmentary, commingled skeletal assemblage recovered within the cave. The taphonomy observed in Cueva de Sangre demonstrates the differences in the archaeological and geological context seen throughout this cave. The taphonomic alterations examined include a combination of manganese coating, calcium carbonate deposition, water erosion, and other taphonomic weathering processes such as longitudinal cracking and cortical flaking. The diverse taphonomy observed will aid in the interpretation of this skeletal assemblage. This study will deepen our knowledge of both the cave's environment and its role in protecting Maya heritage.

Mayorga, Diego [223] see Wande, Claudio

Mazariegos, Eric (Columbia University)

[302]

Precolumbian Art History at the University of California: Teaching, Mentorship, and Disciplinary Contention

In this presentation, I will recount my trajectory influenced by John Pohl during the formative undergraduate years of my art history training at UCLA, taking into account his teaching, the connections between the University of California (UC) and the California Community Colleges (CCC), and the disciplinary tensions in the study of the ancient American past (such as between art history, anthropology, and archaeology). My goal is to sketch a picture of continuity and conjunction that Pohl's mentorship and teaching have made possible. Moving from the CCC system to UCLA, I found that learning about Mesoamerican art history was a rarity, not a given, in a department that traditionally favored the study and scholarship around South America. Further, that an "anthropologist" taught in an art history department resonated with me both then and now, particularly after a recent issue in *21: Inquiries* takes as its central focus these very disciplinary divides. As I see it and have experienced, Pohl's main charge is to broaden and extend the study of the ancient American past to a wider audience; today, when the study of the humanities writ large is being critiqued—if not outright questioned entirely—I view this broadening as essential, integral, and vital.

Mazzetto, Elena (Universidad Nacional Autónoma de México)

[79]

The Tzotzopaztli as a Sacrificial Instrument in Religious Ceremonies of Prehispanic Nahuas

Sixteenth-century written sources, codices, and archaeological findings from the Templo Mayor Project have provided historians and archaeologists good tools for the study of instruments used for sacrifice and self-sacrifice among the ancient Nahuas. Frequently found among them are flint knives, maguey spines, and bone awls. However, there are other noteworthy instruments within the framework of the solar year ceremonies. We are referring here to the *tzotzopaztli* and to the flint-tipped arrows, which were used to sacrifice the *ixiptla* of *tzoalli*, made of amaranth paste, toasted corn, and honey. Regarding the *tzotzopaztli*, this was a wooden stick used as a beater to tighten the web while weaving. In the *Atemoztli veintena*, the *tzotzopaztli* was sunk into the chest of the Tepictoton, small edible effigies that represent the mountains, and with it the heart of the vegetable *ixiptla* was extracted. In this lecture, we will explore the symbolism of this instrument, in relation to the sacrifice of these aquatic entities and with the female half of the Mesoamerican cosmos. Likewise, we will use iconographic data from the codices as well as from ethnographic sources to strengthen our analysis.

McAnany, Patricia (University of North Carolina, Chapel Hill)**[155]***Discussant*

McAnany, Patricia [331] see Dedrick, Maia

McAnany, Patricia [254] see Slocum, Diane

McAuliffe, Richard (Texas State University)**[332]***Bonfire Shelter Archaic Occupations*

Bonfire Shelter in the Lower Pecos Canyonlands of southwest Texas provides evidence of sporadic human occupation of the site across the Archaic period. The deposits known as the Intermediate Horizon, bound by two bison bone beds dating to ca. 12,000 BP and 2500 BP, do not reflect the persistent site reuse seen at other rockshelters in Eagle Nest Canyon. Bonfire lacks features typical of those other rockshelters such as accumulation of burned rock midden deposits from repeated plant baking, bedrock mortars, rock art, and burials. Instead, only four isolated thermal features have been identified and recorded from the Intermediate Horizon. These features provide an opportunity to describe discrete events related to subsistence activities, how those may have changed across the Archaic, and differential use of rockshelters in the canyon. This paper presents the most recent interpretations of these Bonfire Archaic features and new radiocarbon dates placing them into the greater context of contemporaneous occupations of other Eagle Nest Canyon sites.

McAvoy, Scott (Cultural Heritage Engineering Initiative (CHEI), UC San Diego), Dominique Rissolo (CHEI, UC San Diego), Travis Stanton (University of California, Riverside), José Francisco Osorio León (Instituto Nacional de Antropología e Historia) and Francisco Pérez Ruíz (Instituto Nacional de Antropología e Historia)**[321]***Chichen Itza 3D Atlas*

Chichen Itza is an extensive site containing a vast and distinctive corpus of monumental architecture, carved stone iconography, and painted murals. Since its initial excavation in 1913, artifacts have been collected and distributed widely between collections. In 2014, 2017, and 2022 the National Center for Airborne Laser Mapping (NCALM) conducted aerial lidar surveys of the site and surrounding area (Stanton 2019). These lidar surveys provide a spatial reference to align all datasets. Advances in 3D digitization and visualization technologies (Schütz 2016) allow us to capture, contextualize, and analyze artifacts within site-wide lidar and aerial photogrammetry, and feature specific terrestrial/mobile lidar. In this project the authors extend a large-scale interactive digital archive and web visualization framework which aligns and nests full resolution 3D data within geospatial context (Campiani et al. 2023), enabling a fusion and contextualization of over 560 high-resolution models including regional, site, feature, and artifact scale data across multiple years.

McBride, Kevin [311] see Sportman, Sarah

McBride, Mike [9] see Lohse, Jon

McCafferty, Geoffrey [157] see McCafferty, Sharisse

McCafferty, Sharisse (University of Kentucky) and Geoffrey McCafferty (University of Kentucky; University of Calgary)**[157]***Avian Imagery on Precolumbian Ceramics from Pacific Nicaragua*

Throughout human history people have been entranced by avians. Their ability to fly from earth to the sky, while displaying grace and beauty, as well as exhibiting a ferocity to protect their nests and hatchlings was revered. Birds were often seen as messengers between the sky and earth, communicating with other spirits, with the deceased, and transporting souls/spirits to other dimensions. Some cultural groups adopted special birds to represent their clan or area, or to act as an individual's guardian. Birds played an integral part in the animistic beliefs of the early inhabitants of Pacific Nicaragua and their importance was portrayed on clay vessels via techniques of modeling, incising, excising, and painting. This paper will discuss avian imagery on ceramic vessels from 600 to 1600 CE.

McCafferty, Sharisse (University of Calgary)**[157]***Chair***McCafferty, Sharisse (University of Calgary) and Jorge Zambrana (Independent)****[157]***The Rise of Social Complexity in Pacific Nicaragua*

Despite over 150 years of research, the archaeology of Nicaragua remains in its infancy. Projects have conducted settlement pattern surveys and rescue projects have recovered information from endangered sites, but very little problem-oriented research has ever been conducted. Consequently, "big question" interpretations such as the rise of social complexity are generally answered vaguely based on ambiguous data, often supplemented with interpretations adopted from surrounding regions. A basic chronology has been proposed with a refined ceramic sequence, satisfying some of the goals of a culture history for Pacific Nicaragua, but more complex questions are rarely addressed. Over the past decade, however, several rescue projects in the Managua area have recovered information on the La Arenera and Las Delicias periods (500 BCE–400 CE), with which some tentative insights on the rise of complexity can be offered. These data are contextualized with settlement pattern data from Granada, Rivas, and Masaya-Tisma.

McCaig, Haley, François Lanoë (University of Arizona), Joe Keeney (Bureau of Land Management Arctic District), Joshua Reuther (University of Alaska Museum of the North) and Ana Jepsen (University of Wyoming)**[174]***Northern Brooks Range Caribou Hunting Architecture*

Caribou hunting has shaped the cultural landscape of the Alaska Arctic interior. In many cases, this meant intentionally altering local landscapes to the direct advantage of caribou hunters. These engineered landscapes are visible today in various forms of hunting architecture, including stone drive lines, drift fences, cairns, and hunting blinds. Despite the prevalence of these features, caribou drive systems are often only noted peripherally to nearby habitation and processing sites. The lack of spatial analysis, dating, and exploration of the function of various hunting architectures in northern Alaska directly impedes our understanding of these features and how they relate to broader systems of land use through time. This poster outlines preliminary results from a recent spatiotemporal study of caribou hunting architecture in the northern foothills of the Brooks Range. The study area is situated along a significant caribou migration route of the Western Arctic Caribou Herd and was utilized over a long period by groups of North Alaska caribou hunters. The results are evaluated in the context of known local cultural traditions, including Ipiutak and late precontact / early contact Inupiaq and Dene Traditions.

McCarthy, Andrew (University of Edinburgh; CSN), Arthur Krupicz (Nevada State Parks), Kevin Rafferty (College of Southern Nevada), Barbara Roth (University of Nevada, Las Vegas) and Samantha Rubinson (Nevada State Historic Preservation Office)

[103]

Context for Petroglyphs: Recent Results from the Valley of Fire Archaeological Project

Famous for its striking natural landscapes, abundant petroglyphs and important prehistory, Nevada's Valley of Fire State Park is well known to the public, but our picture of the archaeological remains from here is piecemeal rather than comprehensive. A new joint project by College of Southern Nevada, Nevada State Parks, the State Historic Preservation Office and the University of Nevada, Las Vegas is reinvestigating important sites such as Atlatl Rock and its petroglyphs and conducting intensive and extensive surveys to put the rock art panels into context. Building on nearly a century of investigation, this project intends to provide an integrated view of the archaeology of well-known but understudied sites with the intention of establishing an archaeological district status as applicable. The project's continuing work has already resulted in substantial additions to our understanding of the archaeology in the some of the most heavily visited areas of the park and will ensure that these important cultural remains will be preserved in the future.

McCarthy, John (Delaware Department of Transportation)

[254]

A Tale of Two Cemeteries: Learning to Listen to the Voices of African American Descendant Communities in New York and Philadelphia in the Context of Compliance Archaeology, ca. 1990

In the early 1990s I was a project manager at a regionally well-known consulting firm of archaeologists, architects, and planners. Through my involvement in the excavation of Philadelphia's 10th Street First African Baptist Church Cemetery and New York City's African Burial Ground, I learned how to listen to the voices of descendant communities and subsequently argued for a research paradigm based on open, honest, and respectful relationships with descendant communities as partners in the research process. This paper will summarize and compare those experiences to highlight early successes and lessons hard-learned toward community-engaged archaeological praxis.

McCarthy, Matthew [304] see Rick, Torben

McCartin, Madison (University of California, Davis), Flavia Venditti (University of Tübingen), Melanie-Larissa Ostermann (University of Tübingen), Nicholas Conard (University of Tübingen) and Sibylle Wolf (University of Tübingen)

[282]

Foxes in Retrospect: Unraveling Human-Fox Relationships through Fox Tooth Ornaments in the Swabian Jura

Personal ornaments play an important role in our understanding of human cultural and behavioral change during the Upper Paleolithic. Although small, ornaments are often well-preserved, occur in large quantities, vary across space and time, and can shed light on intangible aspects of human lifeways (e.g., identity, relationships, movement, status). However, some ornament forms are better studied than others, and fox tooth ornaments, despite their frequent occurrence and broad spatiotemporal span, are relatively under-addressed. Here we present the first comprehensive study of 40 perforated fox teeth from four cave sites in southwestern Germany. This region's rich symbolic record and evidence of long-standing human-fox relationships make the Swabian Jura an ideal case study. By applying a holistic approach, including geometric morphometrics and traceology coupled with experimental archaeology, we show that most teeth were perforated by bifacial scraping and grooving, and traces of polish and rounding indicate their use as ornaments. Ultimately, we discuss the role of foxes within human socio-symbolic and paleoenvironmental systems in the Swabian Jura and within the broader context of Upper Paleolithic ornamentation across Europe. Our study offers insight into the role of foxes during the Upper Paleolithic, especially regarding human subsistence, cultural expression, and ornament production.

McCauley, Brea (Simon Fraser University) and Jayc Sedlmayr (University of Tennessee)
[25]

The Ensouled Body: A Cross-Cultural Meta-analysis of Spiritual Beliefs about Human Bodily Parts and Substances

In many societies, human bodily parts and substances have been seen as symbolically significant and imbued with spiritual power. Over the years, several scholars have recognized the importance of these bodily parts and substances in various religious beliefs and behaviors. However, their research often focuses on specific regions or time periods. Therefore, the full global scope of these ideas is currently unclear. To address this issue, we conducted a meta-analysis of 25 scholarly works that discuss ethnographic and other firsthand accounts of symbolically powerful human bodily parts and substances. We organized the cultures presented in these works based on geography and language family. Thereafter, we coded which bodily parts or substances were viewed as symbolically powerful. Finally, we outlined the culturally held understandings about why these bodily parts and substances are believed to hold power. Through this analysis, we collated a global sample of cultures that held similar beliefs about the symbolic importance of bodily parts and substances. We propose that these beliefs are widely seen cross-culturally and are an important part of many religious beliefs and practices. This study suggests that researchers should consider these types of ideologically based explanations for archaeological remains of bodily parts and substances.

McCleary, Alexandra (San Manuel Band of Mission Indians)
[10]

Moderator

McClung de Tapia, Emily (IIA-UNAM Mexico), Diana Martínez-Yrizar (IIA-UNAM Mexico), Carmen Cristina Adriano-Morán (IIA-UNAM Mexico) and Emilio Ibarra-Morales
[152]

Regional Settlement, Subsistence, and Environment after the Demise of Teotihuacan

Significant changes in sociopolitical and economic organization following the collapse of the Teotihuacan state between the sixth and seventh centuries CE are evident in settlement patterns as well as archaeological materials including ceramics and lithics. The potential magnitude of this event and subsequent ramifications within the valley itself are only superficially understood as considerable research is focused on the urban center itself. In this presentation, the results of several lines of research are interwoven in order to construct a view of life after Teotihuacan: processes ranging from social/political fragmentation and partial abandonment, subsistence, environmental modification associated with less-intensive agricultural production, and climate fluctuations suggested by decreasing lake levels and reduced precipitation. The integration of results gathered over two decades of research in subsistence and landscape, in combination with earlier perspectives, offers insight into the challenges likely faced by inhabitants of the region as well as the ways in which they were able to adapt to shifting circumstances. The primary objective is to encourage new questions to guide future investigations and, hopefully, contribute to a broader understanding of the interplay of causal and subsidiary factors, treating the Teotihuacan Valley as a case study for long-term transformations.

McClure, Heather (New Mexico History Museum)
[38]

Increasing Public Access to the Treasures of Edgar L. Hewett's American Southwest

The New Mexico History Museum is digitizing and making publicly available the manuscript and photograph collections of Edgar L. Hewett (1865–1946) thanks to a major grant from the National Historical Publications & Records Commission. An inescapable presence in early twentieth-century Southwest cultural life, Hewett earned his nickname of “El Toro.” Among his accomplishments, Hewett was at the forefront of modern Southwest archaeology. He trained a new generation of archaeologists, invited women into the field, and worked tirelessly for the United States Antiquities Act (1906). He led the Museum of New Mexico and the School of American Archaeology (today known as the School for Advanced Research) and preserved New Mexican cultural patrimony. He used his political skills and stubbornness to centralize cultural preservation

and promote and establish New Mexico as a hub for the “groundwork of American archaeology,” one of Hewett’s first publications. By making Hewett’s papers widely available, researchers can grapple with the history of Southwest archaeology and the methods and systems Hewett built as he elevated American archaeology on the world stage. These collections will be publicly accessible via a digital platform. The photographic materials will be available for the first time as an organized research collection.

McClure, Sarah

[85]

Chair

McClure, Sarah

[85]

Decision-Making in Subsistence Herding: A View from Mediterranean Europe

Richard Redding’s body of research pushed zooarchaeologists to think more deeply and creatively about human-animal interactions. His 1981 dissertation “Decision-making in Subsistence Herding of Sheep and Goats in the Middle East” set the stage for his impactful career, bringing together multiple disciplines to characterize the nature of subsistence herding. My own research was heavily inspired by Redding’s dissertation and subsequent publications. This paper presents a case study from Mediterranean Europe that demonstrates how Redding’s ideas continue to influence new generations of scholars. In particular, much recent research on sheep and goat herding among Neolithic farming populations in Mediterranean Europe is using multiple proxies to assess the nature and role of pastoralism, the impacts of introduced animals into new environments, and exploring the biological changes of small founder populations on ancient breed development.

McCool, Weston (University of Utah)

[107]

Boom-and-Bust Population Dynamics: Climate Change, Resource Inequality, and Intergroup Conflict in the Prehistoric North American Southwest

With the transition to agricultural economies, human populations underwent profound changes including, in many regions, rapid growth accompanied by marked volatility. The Colorado Plateau in western North America offers unique insights into volatile population dynamics, as it represents one of the few known occurrences of near total population abandonment by sedentary agriculturalists and a reoccupation by mobile foragers. In this analysis, we investigate the drivers of local population growth and decline and suggest how multiple interactive socioecological conditions influenced the depopulation of the area. We leverage a newly developed archaeological database from the Bears Ears National Monument in Utah to model demographic variation as it relates to climate change, resource inequality, and human conflict, and compare modeled results to those observed in neighboring regions in the Southwest.

McCormack, Katie (Vanderbilt University), Jada Benn Torres (Vanderbilt University) and Tiffany Tung (Vanderbilt University)

[70]

Ancient Oral Metagenomes from La Real: Insights into Health and Infectious Disease across the Middle Horizon Period

La Real is a site located in the Majes Valley of southern Peru associated with two chronologically distinct burial contexts dated to the early and late Middle Horizon periods. Previous analysis of these funerary assemblages has shown similarities in the demographic profiles and incidence of trauma between burials from the two periods. Documented increases in lethal violence in later burials and substantial changes in associated mortuary artifacts, however, have been interpreted in the context of increased Wari influence and associated reorganization of status and social structure in this region. Much is still unknown about how these political changes impacted health and infectious disease dynamics in this population. To this end, we present an

analysis of ancient oral metagenomes from dental calculus sampled from six individuals from La Real. In conjunction with ongoing bioarchaeological work, assessment of taxonomic diversity and metabolic function of the reconstructed oral microbiomes provides insights into diet, infectious disease burden, and oral health at this site. Additionally, this preliminary analysis identifies putative pathogens identified from these oral microbiomes, including members of the Red Complex of *Porphyromonas gingivalis*, *Treponema denticola*, *Tannerella forsythia*, and other periopathogens implicated in periodontal disease.

McCormick Alcorta, David (Yale University; Mohegan THPO)

[164]

A Reassessment of Obsidian Procurement Networks on Guatemala's Pacific Slope

Networks of long-distance exchange in quotidian commodities are essential aspects of prehistoric economies. On the Pacific Slope of Guatemala, there was no more important commodity than obsidian, which accounts for almost all cutting edges found in archaeological contexts. Obsidian sourcing studies on the Pacific Slope have been limited, relied on very small sample sizes, and primarily on visual analysis. Furthermore, syntheses of Mesoamerican obsidian exchange have either avoided the Pacific Slope entirely or only included data from the Soconusco and Highland Guatemala. These analyses have led to models of three major exchange networks that remained static over millennia. However, a more careful scrutiny of the existing literature, unpublished data, and new geochemical evidence suggests a more complicated picture wherein networks of exchange overlap and shift over time. This paper reassesses the existing model to provide a more nuanced view of obsidian exchange on Guatemala's Pacific Slope from the Early Formative to the Late Classic.

McCormick Alcorta, David [99] see Levy, Jay

McCoy, Mark (Florida State University), Mehrdad Aghagholizadeh (Loyola Marymount University), Nicos Makris (Southern Methodist University), Mara Mulrooney (Pacific Legacy Inc.) and Britton Shepardson (Terevaka Archaeological Outreach)

[18]

Iconoclasm Island: New Research on the Destruction of Rapa Nui's Statues

Monuments are a critical window into people's values, beliefs, and social memories. The destruction of monuments is especially important since it can shed light on how these aspects of societies change over time. We describe new research aimed at understanding the destruction of *moai* (statues) on Rapa Nui (Easter Island). Our first goal is to build a chronology of statue toppling based on the exposure of the broken surfaces of statues to weathering. Exposure to rain and sea spray will over time damage statues in a way that can be measured nondestructively with a specialized handheld ultrasound instrument. To determine how long damage observed on statues took to accumulate, we are artificially weathering stone blocks as well as conducting other experiments. Our second objective is to assess how statues were toppled by looking for distinctive patterns in the timing and location of statue toppling that can be linked to purposeful destruction, neglect, or earthquakes. We utilize advances in archaeoseismology, specifically engineering computer simulations that predict how statues might behave in major earthquakes, coupled with recorded and synthetic earthquake waveforms. These data will help the local community to help make decisions about future conservation of statues.

McCrane, Samantha [205] see Fry, Megan

McCraw, Sean [154] see LaDu, Daniel

McCray, Brian (Indiana University East), Jesse Stephen (DPAA) and Christopher Nicholson (Arizona State University)**[198]***Integrating Categorical Legacy Data in Spatial Models: A Unique Dataset from Southeast Asia*

Despite advances made in open-access publishing, significant archaeological information remains confined to the gray literature or to unpublished, internal reports in the possession of institutions. For at least 20 years, archaeologists have realized that digital archiving could make this material more accessible at a larger scale, but the tools to access these documents and convert them to be a legible part of a comparative dataset are still developing. This poster presents the results of an archival research project using natural language processing to make 159 legacy reports digitally accessible for incorporation in spatial models using generalized linear modeling and machine-learning approaches. These data were gathered from archaeological reports generated by the Defense POW/MIA Accounting Agency (DPAA) and its antecedents, in partnership with the center for Digital Antiquity at Arizona State University. Though challenging to implement, we found that context-specific categorical data, such as aircraft type, could be extracted from reports and used to refine generalized linear and machine-learning spatial models. The project shows how creative digital archaeology approaches can work with diverse datasets.

McCreary, Elizabeth (Indiana University of Pennsylvania)**[283]***Geophysical Survey of the Friendly Fire Incident, French and Indian War, Pennsylvania*

Fort Ligonier, constructed in 1758, was the advance post and the last in the line of supply forts constructed for Brigadier-General John Forbes' Expedition to take Fort Duquesne during the French and Indian War. A young George Washington was a colonel stationed at Fort Ligonier. On November 12, 1758, there was a small skirmish between a British Virginia regiment, which was led by Lt. Col. George Mercer, and the French Army and their Native American allies. Col. George Washington was sent with approximately 500 Virginians to aid Lt. Col. Mercer's men. However, during the skirmish, it was realized that the two Virginian regiments were firing on each other. By the end of the Friendly Fire Incident, there were approximately 20 Virginians dead on the battlefield. Washington notes that these men were to be buried the next morning, but it was not documented where they were buried. A noninvasive geophysical survey using both ground-penetrating radar and a gradiometer were conducted to find any potential burials or features associated with the friendly fire incident in addition to any other features on the landscape. Ground truthing was conducted to confirm the presence of some anomalies identified in the geophysical survey.

McCouston, Ashley (Colonial Williamsburg Foundation)**[16]***A Story of Soldiers and Surgeons: Excavating the Remains of Four Individuals and Three Amputated Limbs Interred at the Williamsburg Powder Magazine*

During recent archaeological excavations at the Colonial Williamsburg Powder Magazine, human remains were unexpectedly encountered and subsequently excavated to mitigate potential impacts from ongoing restoration work at the site. The excavation uncovered a mass grave containing three individuals, a single grave containing one individual, and a surgeon's pit containing three amputated limbs. All were identified as casualties of the Battle of Williamsburg in May of 1862. Archaeological and osteological analyses of these remains have provided rare insight into the lives, deaths, and medical practices of soldiers and surgeons during the American Civil War. Physical evidence uncovered during this excavation also directly contradicts many written accounts of the conflict and its aftermath, challenging researchers to rethink, reimagine, and reinterpret this complex chapter of Williamsburg's history. ***DISCLAIMER: Images of human remains will appear in this presentation.

McCuistion, Emily (University of Texas, Austin)**[332]***Radiocarbon Dating in the Lower Pecos Canyonlands*

This paper presents the historical and contemporary context of radiocarbon dating in the Lower Pecos Canyonlands (LPC) archaeological region of southwest Texas. It entwines discussions of early radiocarbon dating history, evolving dating technology and standards, regional infrastructure development, changing archaeological research interests, and land stewardship to understand the potential and limitations of the LPC radiocarbon record. This context, and its relevance, emerged while assembling a regional radiocarbon database, completed in 2019, which was subsequently vetted and used to address broad regional research questions.

McCulloch, Robert [174] see San Roman, Manuel

McCullough, Katelin [95] see Jazwa, Christopher

McCullough, Robert and Andrew White**[326]***Electromagnetic Induction as a Tool for Archaeological Research and Management: A New Manual*

Near-surface electromagnetic induction (EMI) instruments can complement gradiometry and other geophysical instruments for archaeological research and management. We discuss the Geonics EM38-MK2, an instrument that introduces a magnetic field into the ground and measures the electrical and magnetic responses of subsurface materials. The electrical conductivity (EC) of sediments is mainly related to the presence of moisture, while the magnetic susceptibility (MS) is related to the presence of iron oxides. EMI can thus be used to map the presence of human-made features that retain moisture differently than the surrounding soil (e.g., pit features, filled ditches, etc.) and/or have enhanced MS associated with organic and heated sediments. The EM38-MK2 collects EC and MS datasets simultaneously without ground contact (required by resistivity instruments) and with less sensitivity to ferrous metal than a gradiometer, and EMI is better than gradiometry for detecting thin deposits associated with single burning events. We introduce a new manual designed for novice users of the EM38-MK2, funded by the National Center for Preservation Technology and Training of the National Park Service. The manual covers the physics of EMI, instrument calibration, survey techniques, and data processing. Case studies and strengths and weaknesses of the EMI technique are also discussed.

McDaid, Christopher (US Air Force, Fort Eustis, VA)**[270]***African American Community Building on Mulberry Island, Virginia, during the "Jim Crow" Era*

In 1918 the US Army purchased all 3,238 ha (8,000 acres) of Mulberry Island, Virginia, to create Camp Eustis, now the Fort Eustis portion of Joint Base Langley-Eustis. English colonizers and enslaved African laborers had occupied Mulberry Island since the seventeenth century. At the time of the Army's purchase, a significant African American community lived on Mulberry Island. There were African American social and fraternal organizations, financial organizations, and a church founded in 1867. Most of the landowners who sold land to the Army were African American. The Fort Eustis Cultural Resources Management Program has been examining sites from the Reconstruction and Jim Crow eras to better understand the process involved in the creation of a free and vibrant community in the aftermath of enslavement and the increasingly restrictive Jim Crow era.

McDonald, Holli and Lacy Hazelwood (University of Montana)**[69]***Children of Casas Grandes: An Osteological Examination of Subadults at Convento and Paquimé*

Bioarchaeological research has played a significant role in understanding the Casas Grandes region of Northwest Mexico. Excavations at the archaeological sites of Convento and Paquimé recovered ~652 burials dating to AD 700–1450, providing a robust skeletal population for investigations, including research on population demographics, violence patterns, and social stratification. While there is extensive literature on these individuals, previous research focusing on subadults is nonexistent outside of our own. Integrating research on subadults with those of adults is necessary for a more comprehensive understanding of past societies and is particularly useful in understanding the prehispanic Casas Grandes perception of childhood. This study focuses on constructing biological profiles through osteological analyses to gain further understanding of experienced trauma, disease, and demographic information of the subadult population compared to their adult counterparts at Convento and Paquimé. Combined with molecular data, the resulting information is used to address key issues involving Casas Grandes population demographics. Newly constructed biological profiles will provide updated age-at-death and biological sex estimations, trends in physiological stress and trauma experienced by subadults, and any correlations between demographic factors, health, and violence. This will allow for a more comprehensive understanding of Casas Grandes society.

McDonald, Jo (University of Western Australia)**[156]***Dating the Murujuga Cultural Landscape*

The Dampier Archipelago (including Burrup Peninsula) is one of Australia's most significant rock art provinces. Recently nominated to the World Heritage List as the Murujuga Cultural Landscape, this talk describes efforts that are being made to directly date this deep-time rock art sequence, by innovative direct dating approaches. New efforts to understand desert varnish and experimental work with luminescence surface dating are being used alongside broader landscape focus on sand dunes and freshwater carbonate tufas. This project is contextualizing the human use and extensive modification of this land- and seascape through time.

McDonough, Katelyn (University of Oregon), Perry Chocktoot (Klamath Tribes), Geoffrey Smith (University of Nevada, Reno), Dennis Jenkins (University of Oregon Museum of Natural and Cultural History) and Richard Rosencrance (University of Nevada, Reno)**[87]***The Traditional Nutrition Project: A Collaborative Study of Plant Foods to Understand Indigenous Foodways and Health in the Northern Great Basin*

Foodways, culture, and health are closely intertwined. As such, food is a central aspect of Indigenous identity and the subject of much anthropological research. Traditional knowledge and archaeological records show that plants have always played important roles within Indigenous foodways in the Great Basin, yet nutritional information for those foods is scarce. This lack of dietary data is problematic for Indigenous communities seeking nutritional information, and for anthropologists who wish to consider nutritional perspectives. The Traditional Nutrition Project is a partnership developed between members of the Klamath Tribes, University of Oregon, and University of Nevada, Reno, to understand human diet and health in the past and present. The goal of the project is to develop a nutritional database for ancestral foods through biannual harvesting events that concurrently function to strengthen relationships between Tribal members and anthropologists while encouraging Indigenous perspectives and practices. This talk will introduce the project, highlight plants of interest, and share results of the first gathering events. We hope this project will support health and food sovereignty within Indigenous communities, contribute to theoretical frameworks in anthropology, and strengthen relationships between all involved.

McDonough, Katelyn [337] see Saper, Shelby

McDonough, Katelyn [219] see Smith, Geoffrey

McDowell, Alyssa (Arizona State University) and Cindy Hsin-yea Huang (Arizona State University)**[198]***Cutting Edge Technology: A Comparison of the Environmental Impact on the Emergence and Dispersal of Microblades in Siberia and Northern China*

During the Upper Paleolithic, microblade tools emerged in Siberia and northern China, representing a significant technological advancement in tool-making and tool use. It is hypothesized that microblades emerged early in Siberia as an adaptation to the cold high-altitude environments, and the intensification of forager mobility due to the harsh environments led to its dispersal in North Asia through migration and cultural diffusion. Crafting microblade tools was a complex process that required a high degree of skill and knowledge. The environmental conditions and available resources in each region likely influenced the emergence of these tools in specific ways. It has been argued that knowledge of blade production may have given foragers in Siberia the skills necessary to invent microblades and the environmental conditions may have necessitated it. The adaptive significance afforded to this highly mobile toolkit allowed for it to spread rapidly throughout North Asia. This study explores how the colder environments of these regions impacted the emergence and dispersal of microblade tools in North Asia through spatial and statistical analyses of microblade sites and Paleoenvironmental data.

McEnroe, Katherine (Colonial Williamsburg Foundation) and Sean Devlin (Colonial Williamsburg Foundation)**[16]***Curation and Conservation for Reburial: Balancing Respect and Discovery*

Over the last three decades, archaeological approaches to the excavation of human burials have radically shifted. These changes have demanded a large-scale reevaluation of the decision-making processes and research practices deployed not only during these excavations, but also in the approaches to curation and disposition after excavation is finished. From a collections' perspective, this shift highlighted the need for the development of practices centered on the ethical treatment of materials associated with burial contexts and in support of repatriation efforts. This paper explores the interaction of curation and conservation in handling, documenting, analyzing, treating, and returning the artifacts associated with the burials from two recent projects undertaken by the Colonial Williamsburg Foundation's Department of Archaeology. It focuses on the practical protocols implemented for the collections during these projects and reflects on the value of conservation and curatorial analysis while balancing the need for discovery of information with respect. ***Images of human remains may be shown.

McFarlane, William (Johnson Co. Community College, KS)**[181]***Discussant*

McGeough, Kevin [85] see Lev-Tov, Justin

McGill, Dru (North Carolina State University), Katherine Chiou (University of Alabama) and Daulton Selke (North Carolina State University)**[98]***Background and Initial Results from a NSF Study of Archaeology Ethics Training*

In this poster, the authors introduce a project funded by the National Science Foundation to advance knowledge on the pervasiveness and effectiveness of ethics and responsible conduct of research training interventions in archaeology and other science, technology, engineering, and mathematics (STEM) fields. Specifically, the project will examine the organization, implementation, and long-term results of competitive ethics case study-based debates, such as the Society for American Archaeology Ethics Bowl. The poster will

outline the project goals and methodologies, provide information on how archaeologists can participate, and share initial results from interviews with past Ethics Bowl participants and a mixed-method survey distributed to thousands of archaeologists.

McGimsey, Charles

[154]

Louisiana's Dugout Canoes: An Inventory and Assessment

Louisiana has 31 dugout and plank canoes spanning the last 2,000 years recorded in the archaeological site files. The collection reflects a diversity of shapes and sizes in both Indigenous and Euro-American assemblages, suggesting that beyond the required linear shape, individual preference and intended function significantly influenced form. This presentation will illustrate the variety of forms seen in both assemblages and how those appear to have changed over time and space.

McGrath, Katie, Zsolt Nyárádi (Haáz Rezso Múzeum), Katie Zejdlik (Western Carolina University) and Jonathan Bethard (University of South Florida)

[68]

Comparing Demographic Patterns of Archaeological and Modern Cemetery Data: A Novel Application of GPS Technology

Bioarchaeologists routinely generate demographic estimates of past populations from archaeological contexts across time and geography. Despite numerous ways that bioarchaeological data enhance demographic reconstructions of past populations, few contexts allow direct comparison between archaeological and modern demography of the same locale. This project presents a comparison of demographic data drawn from a Transylvanian archaeological cemetery and a modern cemetery directly adjacent to the archaeological site. The Papdomb site represents a medieval Szekler village church and churchyard that was in use for approximately 800 years. A modern cemetery utilized by the same village was established in the nineteenth century and is contiguous to the medieval cemetery. During our 2023 field season, the location of all visible tombstones was mapped using a cell phone and a GPS application. All observable names, birthdates, and death dates were recorded ($n = 319$ graves containing 522 individuals). Demographic patterns drawn from the tombstone data were compared to the site's bioarchaeological demography and several differences were observed, namely fewer nonadults and more older adults are present in the modern tombstone dataset. This novel use of GPS data demonstrates potential differences in demographic patterns across time and calls attention to the limits of age estimation in bioarchaeology.

McGruiere, Sonya [20] see Tune, Jesse

McGuire, Randall (Binghamton University)

[298]

Thinking about The Dawn of Everything in Black and Red

The Dawn of Everything urges us to rethink the most basic concepts of culture and cultural evolution. Waving the black flag of anarchism, Graeber and Wengrow question the widespread idea that inequality and exploitation were unavoidable consequences of human technological "advancement" and population growth. They maintain that humans do not have an inherent nature and that human actors make culture and cultural change. These actors are powerful and capable of choosing freedom. I applaud the authors for engaging a popular audience countering banal ideas of pop psychology (and academic evolutionary psychology) and media that sees human inequality as given. Waving the red flag of Marxism, I find much of value and much to agree with in these pages. Both the black and the red study history to show that humans created the modern social world. Since humans created it they can also transform it. But the key question must be how do we change it? Graeber and Wengrow emphasize the goal of emancipation and repeatedly show how people in the past chose to live free. Under the red flag, Marxists engage in a praxis that focuses on the relationships between material conditions, human consciousness (choice) and human action.

McGuire, Sara, Christine France (Museum Conservation Institute, Smithsonian) and Jared Beatrice (College of New Jersey)**[123]***“Young, Scrappy, and Hungry”: Social Upheaval and Changes in Food Resource Access in Colonial and Postcolonial America*

The Revolutionary War was a crucial turning point in American history, as the 13 British colonies broke with England and established themselves as an independent nation. This research takes a biocultural approach to explore the impact of these dynamic changes at the individual scale in terms of resource access and diet. Stable carbon and nitrogen isotope ratios from teeth, long bones, and rib samples were analyzed to explore diet throughout life for a subset of individuals ($n = 100$) interred at the historic First Baptist Church of Philadelphia (FBCP) cemetery during the colonial (pre-1775 AD) and post-colonial (post-1783) periods. The data reveal variation in stable nitrogen isotope values during infancy and childhood for both adults and subadults that indicate changes in feeding practices to incorporate more diverse proteins for site subadults, as compared to the childhood diets of adults. The data also reveal dietary patterns that align with different socioeconomic statuses when compared to contemporary populations. Overall, the data suggest increased dietary heterogeneity, similarity in diet for males and females, the prevalence of C_3 grains in the diet, and increased consumption of meat over time. As such, this research reveals insight into dietary stability and resilience among Revolutionary Era Americans in Philadelphia.

McIlvoy, Karen [227] see Proebsting, Eric

McKeeby, Zachary (University of Virginia)**[95]***Households, Community, and Crafting at Kanono: The Creation of an Early Second Millennium Village in Western Zambia*

The Machile River in Western Zambia formed a significant locus of Iron Age life in Zambia and served as a conduit for the localized movements of people, things, and ideas in south-central Africa for much of the last two millennia. Within this dynamic corridor, the early second millennium Kanono site represents a relatively short-lived but well-defined Middle/Late Iron Age farming community that integrated local crafting practices with global and regional orientations during a period of dramatic political and economic changes across southern, central, and eastern Africa. Combining high-resolution geophysical survey and the results of targeted excavations at Kanono, this paper traces the emergence, growth, and abandonment of the village between the mid-thirteenth and early fifteenth centuries CE. It is argued that changes seen in the village relate to the formation of a bounded co-residential community built around unilineal descent, who may have leveraged prestige in iron working into other forms of prestige—namely, wealth in people and access to exotic goods. Approaching the archaeological record at Kanono from the perspective of household archaeology and daily life allows for an evocative “peopling” of south-central African political economies.

McKellop, Robbyn (Wichita State University)**[285]***Assessment of the Boxed Springs (41UR30) Ceramic Assemblage*

Located in the east Texas Pineywoods, Boxed Springs (41UR30) is a lesser-known Early Caddo mound center characterized by a diverse and distinctive archaeological assemblage. Recently, Wichita State University has been granted permission to access the eastern portion of the site which was previously restricted. Excavation findings during the 2021 and 2022 field seasons are thus far consistent with prior assessments of the ceramic assemblages at Boxed Springs and other contemporaneous sites. To facilitate this research, the ceramic assemblage was assessed for attributes such as raw material use, temper, atmospheric firing, surface treatment, decoration, form, and ware type. These attributional features were then compared to previously known and established ceramic assemblages in the greater Caddo area. By identifying such features, we are able to further our understanding of the Early Caddo lifeways and technological adaptations.

McKenna, Moriah (University of Pennsylvania), Kathleen Morrison (University of Pennsylvania) and Jennifer Feng (University of Pennsylvania)

[288]

Mountains of Manure: Assessing the Botanical Potential of South Indian Neolithic Ashmounds

The Neolithic of southern India is notable for features known as Ashmounds, large accumulations of fired and often vitrified cattle dung. First described in the late nineteenth century, the dung-based composition of these impressive features was clearly established by the mid-twentieth century. To date, however, no botanical analyses of Ashmounds have been carried out, notwithstanding their potential to reveal aspects of regional vegetation, livestock forage, and climatic conditions. We report here on preliminary assessment of the potential for pollen and phytolith analysis of ashmound material, using newly collected samples from the site of Brahmagiri, in northern Karnataka.

McKenzie, Emily (University of California, Berkeley) and Christine Hastorf (University of California, Berkeley)

[286]

Design, Construction, and Evaluation of a Solar-Powered Mechanized Flotation System

Flotation remains one of the most important methods by which paleoethnobotanists recover botanical remains from archaeological contexts. However, logistics in the field can make supplying mechanized flotation machines with water (and subsequently powering motorized pumps) a challenge. This poster details the process by which we utilized bilge pumps, batteries, and solar panels to construct a mechanized flotation system that operated with a natural water source and the power of the sun. We describe the installation and operation of the system in the field during the Taraco Archaeological Project 2022 and 2023 field seasons and also examine the effectiveness of this system through an analysis of recovery rate and operation time compared to a gas-powered motor set up, operated during the same field seasons. Finally, we discuss the advantages and disadvantages of the system we used, and provide recommendations regarding the construction and operation of similar systems from this experience.

McKeown, Ashley [267] see Ahlman, Todd

McKillop, Heather (Louisiana State University)

[5]

Discussant

[5]

Chair

McKillop, Heather (Louisiana State University) and E. Cory Sills (University of Texas, Tyler)

[295]

Coastal Trade: The Ancient Maya of Belize

The sea was important to the ancient Maya as a source of ritual paraphernalia and seafood, as a transportation and trade route, and as a desirable place of settlement. The coast of Belize includes hundreds of cays within the second longest barrier reef in the world and a coastline with navigable rivers connecting the sea to the heartland of Classic Maya civilization. However, sea-level rise flooded ancient coastal communities leaving them buried on land under mangroves or underwater, making them invisible in the modern landscape and diminished in view in the archaeological record. The known record of ancient coastal settlement in Belize extends from about 600 BC in the Middle Preclassic through the Postclassic. In this paper, we highlight coastal research by Maya archaeologists. We focus on research by the senior author on Wild Cane Cay and our ongoing research at the Paynes Creek Salt Works. The paper underscores the significance of coastal settlement and sea trade, the significance of salt and other marine resources from the Caribbean coast of Belize to the interior, and the endurance of the coastal Maya of Belize after the Classic Maya collapse.

McKillop, Heather [5] see Foster, Cheryl
 McKillop, Heather [5] see Sills, E. Cory

McLaren, Whitney [49] see Esdale, Julie

McLeester, Madeleine (Dartmouth College), Jesse Casana (Dartmouth College), David Overstreet (College of the Menominee Nation) and David Grignon (Menominee Tribal Historic Preservation Office)

[130]

Wetland Soils and Ancestral Menominee Maize Agriculture in Michigan's Upper Peninsula

Today, the dense forests of the northern Great Lakes seem an unlikely place for expansive ancestral Native American agricultural fields, especially ones dedicated to sun-loving crops, like maize. The short growing season in these northern climes, dense forest, alternative staples like wild rice, and past settlement history all would suggest a limited production of maize. However, our recent drone lidar survey documented expansive fields in Michigan's Upper Peninsula, challenging long standing conceptions of the intensity of maize agriculture. Here, we describe our ongoing efforts to document the expansive raised fields at the threatened Sixty Islands archaeological site in Michigan's Upper Peninsula. These fields were constructed with organic-rich wetland soils, illustrating the prowess of ancestral Menominee farmers to overcome the environmental challenges of these northern latitudes and the critical way that wetlands are utilized in intensive farming.

McLeester, Madeleine [283] see Alperstein, Jonathan

McLeester, Madeleine [60] see Fenner, Jack

McLeester, Madeleine [130] see Schurr, Mark

McLellan, Alec (University of Toronto)

[226]

Chair

McLellan, Alec (University of Toronto) and Cara Tremain (Langara College)

[226]

Digital Technologies in the Periphery of the Ancient Maya site of Lamanai, Belize

Threats to ancient Maya cultural heritage sites—from modern construction, looting, agricultural intensification, and burgeoning tourism—are an ongoing challenge in Belize. This is especially true of the northwest region of Belize, in the periphery of the well-known site of Lamanai, which has been hard-hit by looting and a growing community of farmers who clear parcels of land with heavy machinery. Recognizing that traditional paper-based recording methods are often slow with inconsistent results across multiple users, and therefore unsuitable for rapidly recording data from sites at immediate risk of damage and destruction, the Coco Chan Archaeological Research Project implemented a digital recording strategy during their investigations in Lamanai's periphery. This presentation will provide an overview of the different technologies used by the project, which included a digital software called STRATUM to record field information (developed by a team of researchers at the University of New Brunswick). iPad Pros with light detection and ranging (lidar) scanners were also used to create 3D models of excavation units and cultural features. Additionally, drone photography was captured using a DJI Mavic 3 and images were processed via photogrammetry into 3D and digital elevation models (DEM) of the landscape using Agisoft Metashape.

McMahon, Kelton [222] see Cybulski, Jonathan

McMains, Frank [24] see Holley, Marsha

McMichael, Andrew [2] see Pyszka, Kimberly

McNeil, Bronwyn [185] see Titelbaum, Anne

McNeil, Cameron (Lehman College, CUNY)

[291]

Chair

McNeil, Cameron (Lehman College, CUNY), Edy Barrios, Kenia Chacón, Zachary Hruby and Sheldon Skaggs

[291]

Plan de las Mesas, Copan, Honduras: Teotihuacan Is in the House

The Plan de las Mesas archaeological site rests high above the Copan Valley, 2.5 km northwest of the Acropolis. Inhabited by at least the Preclassic, evidence suggests that it functioned as a defensive fortress, or citadel, by the Early Classic period. This paper focuses on Group 1, Plaza B, and Group 12. Group 12 rests on a long platform with a direct view of the Copan Acropolis. Its structures were likely both domestic and defensive, housing warriors and their families. Nearly 8% of the obsidian found at this site is Pachuca from the Sierra las Navajas source, including Pachuca projectile points. Plaza B, created by filling in a space between two hills, rests up a steep incline from Group 12. It functioned as an important ritual space, a gateway to other parts of the site, and a repository for large volumes of ritual debris that cascaded down onto it from Plaza A. Structure 7, excavated in the 2023 field season, combines Maya practices found in Copan along with ritual behavior hailing from Teotihuacan. This archaeological site represents an unparalleled opportunity to learn about the processes of political interaction between Teotihuacan-backed Maya and the local population.

McNeil, Cameron [291] see Barrios, Edy

McNiven, Ian (Monash University, Australia)

[25]

Trans-species Archaeologies and Ritual Bone Deposits: Respecting the Animal Ancestral Dead

Although created by people, marine mammal bone (e.g., whale, seal, dugong) ritual installations on land and in the sea are also expressions of marine mammal agency given that the sites are materializations of a social and moral contract centered on mutual respect and reciprocity. These sites are as much a part of the sentient, social, and spiritual world of the hunters as they are of the sentient, social, and spiritual world of the animals hunted. Hunters know that unless they treat marine mammal bones with respect and construct formalized and highly structured installations using the bones, especially skulls, of their prey, that their relationship with the marine mammals will break down and result in hunting failure. In other words, marine mammal bone installations were constructed by people for people but also, critically, for marine mammals. Marine mammal bone installations blur the boundary between the archaeology of humans and the archaeology of animals. These installations encompass a trans-species archaeology of human and animal agency that extends recent ideas on “multispecies ethnography.” They also require us to ask the radical ontological question of “What do marine animals think of the installations comprising the bones of their ancestral kin assembled by hunters?”

McNutt, Ryan (Georgia Southern University) and Camilla Damlund (University of Glasgow)

[324]

Blockade to Stockade: Blockade Runners, Globalization, and Confederate Supply

During the American Civil War, Glasgow-built blockade runners emerged as crucial supply conduits to the Confederacy, prolonging the conflict and sustaining chattel slavery by clandestinely running cargo into Confederate ports. This paper delves into the historical archaeology of blockade runner cargos, an area

relatively unexplored beyond shipwrecks. It investigates the material culture carried as cargo beyond munitions to explore luxury and mundane items that provided a sense of normality amid conflict. Through an analysis of archival records and material culture, market demands and choices were unveiled, shedding light on the role of these vessels in supplying non-combat necessities. By comparing artifacts recovered from Confederate and POW areas at Camp Lawton (9JSI), which held Union Prisoners of War outside of Millen, Georgia, the research establishes a direct link between supply lines and terrestrial sites in the South. And the flow of supplies into the interior of the Confederacy along rail lines from the open port of Wilmington, North Carolina, to Millen, where it passed into illicit markets utilized by guards and POWS inside the stockade. Ultimately, this research illustrates global connections between the Confederacy, Glasgow, and the 1860s economic boom rooted in enslaved labor, despite Britain's earlier abolition of slavery.

McWilliam, Mya (Vancouver Island University)

[99]

Bleeding in Limbo: Health, Tasks, and Ritual in the Liminal Spaces of Prehistoric Menstruants

The cycles of menstruating bodies have long been characterized in terms of impurity, pathology, and socio-spiritual threat both outside and within the field of archaeology. My research makes use of the archaeological record and existing literature to shed light on the experiences of women and menstruants in prehistory outside of these typically assumed conditions and illuminates archaeological sites where primary research may help further our understanding of women's health, experiences, and liminal spaces both in antiquity and contemporary society. Looking at physical spaces, material production and taskscapes, and the social impacts and functions associated with rituals of menarche, menses, and the stages of pregnancy, this work develops a preliminary understanding of women's liminal spaces in prehistoric Scandinavia, the Americas, and the Ancient Near East. Topics explored include the mitigation of perceived impurities associated with menstruation through forms of isolation, ritual purification, and behavior limitations; specific material production pursued in liminal periods and spaces related to menstruation and pregnancy, such as fiber arts and medicine; and dwelling structures specifically designed for women and menstruants' repeated isolation or temporary habitation.

Meade, Mike [197] see Moore, Erik

Meaden Jeanssonne, Emily [131] see Barbera, Aida

Meadows, John [91] see French, Katherine

Means, Bernard (Virtual Curation Laboratory)

[65]

Moderator

**Medchill, Brian (Gila River Indian Community Cultural Resource Management Program),
Reylyne Williams (Gila River Indian Community), Teresa Rodrigues (Gila River Indian
Community) and Chris Loendorf (Gila River Indian Community)**

[88]

Traditional Sports in the Sonoran Desert of Arizona

The O'odham of southern Arizona continue to participate in traditional sporting events, and a variety of organized competitions are still held today. Although they are one people, the O'odham are currently organized into four Communities, which are collectively known as the Four Southern Tribes. People in each of these communities still practice traditional sports, although the degree of participation varies, with women generally more active than men. We report the results of a questionnaire given to members of the Four

Southern Tribes regarding interest and participation in customary O'odham sporting events. These ongoing practices include games such as Toka, which is a highly competitive sport that is played with sticks, and is exclusively practiced by women. This information is then compared with ethnohistorical and ethnographic observations regarding athletic competitions in the southern Southwest. These data are in turn used to make inferences regarding prehistoric sports, which are difficult to infer based on archaeological information alone.

Medina, Ishmael (University of Utah), Brian Coddling (University of Utah), Kenneth Vernon (University of Colorado, Boulder) and Jerry Spangler (Colorado Plateau Archaeological Alliance)

[198]

Reconstructing Utah's Indigenous Maize Farming Niche

Maize (*Zea mays*) was one of the most widespread domesticated plants in the Americas before European colonization. Despite its widespread distribution, explaining how and why ancient maize farming spread into Utah remains a central research question in Southwest archaeology. To understand how ancient maize spread, we need a comprehensive suitability model for maize agriculture using multiple ecological variables that accurately predict where maize farming was suitable and unsuitable. For this presentation, we have constructed a species distribution model (SDM) for maize, using a novel machine-learning approach called Random Forest, to produce a suitability model for Indigenous maize agriculture in Utah (ca. 3200–500 BP). Furthermore, this research builds on ecological theory recently applied to archaeological data by utilizing the ideal free distribution (IFD) model to explain the changes in behavior and settlement patterns observed in the archaeological record. Comparing locations best suited for maize agriculture, determined by the SDM, with well-dated Indigenous maize farming sites will test the predictions of the IFD model and help explain Indigenous maize farmer settlement patterns throughout the northwestern limit of maize agriculture.

Medina, Minneth (Junta Intermunicipal Biocultural del Puuc), James Callaghane (Kaxil Kiuc AC) and Rafael Lopez (Junta Intermunicipal Biocultural del Puuc)

[83]

Las reinas de la selva

El códice maya de Madrid, muestra aspectos de la vida cotidiana de los mayas, uno de ellos la meliponicultura, producción de las abejas sin aguijón. En el Puuc, la meliponicultura es una práctica desarrollada de manera secundaria después de la milpa maya, complementando el ingreso campesino; más recientemente la producción de abejas apis ha cobrado mayor espacio, por su alto rendimiento productivo y valor de mercado. Ambas, son una forma de conservar los recursos y las creencias. En la Reserva Biocultural Kaxil Kiuc, la meliponicultura se ha dado desde el asentamiento de los primeros pobladores, aprovechando las fuentes cercanas de agua como como jaltunoob y aktunoob, a la par que han mantenido la biodiversidad florística, logrando así al varias temporadas de miel. Actualmente la Junta Intermunicipal Biocultural del Puuc, ha promovido la profesionalización de esta actividad con grupos de mujeres mayas, desarrollando capacidades y la elaboración de subproductos, promoviendo el autoconsumo, acceso a mercado a con la marca Origen Puuc. La apicultura y en especial la melipoicultura, es una de las formas de resiliencia ante las crisis ambientales, económicas y sociales que se están dando en la Región Biocultura del Pucc, además de la conservación de la identidad y bioculturalidad.

Medina, Victor [83] see Hernandez, Hector

Mehta, Jayur (Florida State University)

[195]

Moderator

[104]

Chair

Mehta, Jayur (Florida State University) and Tara Skipton (University of Texas, Austin)
[131]

Archaeology for Many More: A Necessarily Broad Approach to the Archaeology of Evergreen Plantation
 The Evergreen Plantation Archaeological Survey (EPAS) focuses on understanding Black life during contexts of enslavement and post-emancipation on Evergreen Plantation within Louisiana's Cancer Alley. In summer 2023, EPAS hosted its first interdisciplinary field school in which students not only learned archaeological methods but also undertook a diligent survey of Black culture and literature through two other organized courses. In this presentation, we lay out the ongoing and theoretically rich considerations in the making of this project that inherently encompasses more stakeholders, such as establishing the scale of analysis, defining descendant communities for plantation sites generally, and more.

Mehta, Jayur [165] see Ostahowski, Brian

Meierhoff, James (University of Illinois, Chicago) and Sergio López-Garzona (Universidad de San Carlos de Guatemala)
[276]

End of the Line: Tikal's Final Ceramic Phase
 In the latter half of the nineteenth century the ruins of Tikal were briefly reoccupied. Refugees fleeing the Caste War of Yucatán cohabited with Lacandon Maya from the surrounding jungles and heavily Hispanized Itza Maya from the lakes of central Petén, Guatemala, to form a small multiethnic hamlet among the hulking ruins of the ancient Maya city. While the village was largely provisioned with cheap globally produced consumer goods from Great Britain and the United States, the most numerous artifact type discarded or abandoned by the historic villagers was a locally made ceramic ware. These ceramics were likely made in San Jose, on Lake Petén-Itza, where ceramic production continued well into the twentieth century. Tikal Project ceramicist Patrick Colbert assigned Tikal's final ceramic phase, the Caban ceramic sequence, to the Early Postclassic (AD 950–1200) but stated that it is "poorly defined," and it remains poorly understood today. This presentation explores Tikal's Caban ceramic phase and offers an introduction to the historic ceramics of Tikal, which potentially make up a large portion of the Caban ceramic assemblage. While focusing on Tikal's ceramics, this study begins a regional analysis of historic nineteenth-century ceramic traditions of the Petén and surrounding area.

Meinecke, Helena, Diana Arano Recio and Abiud Pizá Chávez
[158]

Archaeological Evidence in the Caves and Cenotes of the Yucatán Peninsula, Mexico
 Since prehistoric times, the caves of the Yucatán Peninsula have been the locus of regular visits by animals but as well by the first humans populating the continent. Thousands of years later, the Maya culture would establish its cities around the cenotes and the few bodies of surface water. The Maya culture has developed over the centuries methods for the control and storage of water, and a system of rituals related to the underworld, where the caves and cenotes were the main scenarios. For more than seven decades, these paleontological, archaeological, and historical contexts have been identified and recorded. In this lecture, we will summarize and analyze these investigations by contrasting the archaeological evidence diachronically and linking them to the successive changes in climate occurring in the region.

Meinsen, Jamie
[43]

The Pottery and the People of the Pethick Site in Schoharie County, New York
 In the summer of 2014, the New York State Museum Cultural Research Survey Program and the Anthropology Department at the University at Albany undertook the excavation of the Pethick Site. An archaeological field school was organized for the detection and study of the site's Native American features associated with an agricultural village. Through the efforts of students and professional archaeologists,

hundreds of Native American artifacts were found in addition to historical ceramics, glass, brick fragments, pipe stems, and metal nails. The Pethick Site produced about 58 sherds of pottery related to the time after the arrival of Europeans to the New World. The date ranges for these ceramics goes from the early 1700s to the mid-1900s. The countries that could have made these ceramics include the United States, Germany, the Netherlands, Scotland, and England. While this project was originally undertaken in the hopes of shedding some light on the first European occupation of the Pethick Site, it has become apparent that the ideal way of studying the development of nationality and identity in an archaeological context would be to look into regional history, economy, and consumption patterns.

Meister, Julia [299] see Mader, Christian

Meister, Nicolette (Beloit College, Logan Museum of Anthropology)

[73]

Normalizing Culturally Informed Collections Stewardship

Culturally informed stewardship takes a holistic and culturally inclusive approach to the preservation, access, and use of cultural items, records, and images. It acknowledges that curation and care are political acts and that the stewards of cultural collections must do more than simply consider the autonomy, expectations, and requirements of originating communities, but work to privilege Indigenous perspectives. Museum, conservation, and originating community stakeholders have advocated for culturally informed collections stewardship for decades, but it has only recently emerged as best practice. This presentation offers an overview of the trajectory of cultural care, shares the challenges of implementation at a small academic anthropology museum, and highlights training needs and opportunities at the Center for Collections Care at Beloit College.

Mejía Cano, Martha [217] see Archila Montanez, Sonia

Melby, Autumn (University of Pennsylvania)

[98]

Scout's Honor: Archaeological Stewardship of Rural Spaces with the Boy Scouts of America

Archaeologists working in isolated rural locales continue to face the challenge of protecting archaeological sites from threats of looting and vandalism. Whether physically secluded beyond a watchful eye or simply located on private lands with few legal protections, sites in these rural spaces are at particular risk for damage or (un)intentional destruction. Nationwide scouting organizations such as the Boy Scouts of America (BSA) present a unique avenue to physically bring together disparate rural communities and build lasting relationships with an eager to learn audience. Scouting groups are powerful potential allies in promoting stewardship values and practices as archaeological ambassadors in their own rural communities. Based on recent fieldwork experiences in Monroe County, Illinois, this poster illustrates the Southern American Bottom Archaeological Project's (SABA) partnership with Camp Vandeventer to host an inaugural Archaeology Merit Badge Day in our 2023 field season. Here I discuss unique considerations, challenges, and potentials for such engagement in promoting enduring community partnerships and stewardship practices among rural youth and their guardians.

Melendez, Juan Carlos [333] see Freidel, David

Meléndez Olivera, Paulina

[68]

A Macroscopic Investigation and Analysis of Trauma among Late Post-Medieval Adult Male Individuals of St. Michael's Litten, Chelsea Old Church and St. Benet Sherehog

In post-medieval England (1500s–1800s), the rise in industrialization and urbanization provides an opportunity to analyze a potential glimpse of how adult male individuals lived daily life in England. This study looks at the potential etiological factors, types of trauma observed and found in the three selected dataset cemeteries of the Chichester Skeletal Assemblage, Chelsea Old Church, and St. Benet Sherehog. The results presented that the most common type of trauma among adult male individuals concluded being accidental trauma followed by intervertebral disc herniations (also known as Schmorl's nodes), with equal and proportionate amounts of the number of individuals from the cemeteries being greatly afflicted with work-related and accidental trauma. The least prevalent, yet present in all cemetery datasets of traumas was interpersonal violence, followed last by surgical interventions in which no individuals from the Chichester Assemblage that were selected from this set presented evidence of medical or therapeutic intervention. Overall, the results shed light on the effects of the impact that diverse work conditions, economies, and lifestyles had on adult males. This study can be further expanded to more geographical areas, cemetery populations, time periods, and demographic groups.

Melgar Tísoc, Emiliano [109] see Lowe, Lynneth

Melgar Tísoc, Emiliano [290] see Rodriguez Obregon, Daniela

Melgar Tísoc, Emiliano [79] see Ruiz, Judith

Meliksetian, Khachatur [50] see Lindsay, Ian

Melton, J. Anne (University of Minnesota)

[93]

Chair

Melton, J. Anne (University of Minnesota)

[93]

Assessing Variability in Refitted Lithic Reduction Sequences at Boker Tachtit (Israel)

Distinguishing cultural relatedness from independent convergence in lithic technological behavior requires high-resolution behavioral data. Arguably, the best source of such high-resolution data comes from refitted reduction sequences because these sequences illustrate the procedural steps taken by individuals to produce stone tools. But much remains to be understood about the degree of variability in production that is possible among individuals within a single population (i.e., shared cultural environment). Before one can assess the degree to which something is “culturally related,” one must identify the range of acceptable variability. Simply put, what is “different” enough to be considered culturally unrelated? This project first measures variability within a single occupation utilizing refitted lithic reduction sequences from the earliest occupation (Layer 1) at Boker Tachtit, an Initial Upper Paleolithic site in the Negev (Israel). Secondly, once a range of variability has been established for a single occupation, I assess the likelihood that subsequent occupations (Layers 2 and 4) produced tools in a culturally similar manner by an iterative comparison of individual nodular reductions (as proxies of an individual's learning environment) within and between occupations to produce a quantitative measure of variation that falls within/outside of the range observed within the first occupation.

Melton, Mallory (Lycoming College)

[128]

Chair

Melton, Mallory (Lycoming College)

[128]

Beans of Power: Phaseolus and Late Preclassic Rulership on the Pacific Coast

Rulership in Mesoamerican societies was inextricably tied to generative aspects of agriculture. Becoming a

focal point for the maintenance of cosmological order provided a pathway for asserting control of aspects of the natural world, like rainfall, that directly influenced agricultural productivity. Textual descriptions even associate the process of coming into power with sowing, and the maintenance of that power with cultivation and growth, including an aspect of verticality that is conspicuously vegetal. Discussion of this special relationship between royal power and agriculture has largely centered around maize and cacao. I introduce a time and place for which an early exercise in rulership coincided with a peculiar abundance of *Phaseolus* beans recovered archaeologically. In comparison to earlier and contemporary contexts from the Pacific coast, the bean assemblage from the Middle to Late Preclassic El Ujuxte site (ca. 600 cal BCE–200 cal CE) is unprecedented in its diversity, including all five domesticated bean species found in Mesoamerica—*Phaseolus acutifolius*, *P. coccineus*, *P. dumosus*, *P. lunatus*, and *P. vulgaris*. I situate this explosion in *Phaseolus* diversity in context with changes in ritual practices associated with the emergence of rulership to consider how these little legumes can enrich our understanding of major sociopolitical changes.

Menchelli, Simonetta [268] see Carmody, Stephen

Mendenhall, Phillip (University of Pittsburgh; Carnegie Museum of Natural History) and Alysha Lieurance (University of Pittsburgh)

[69]

Shelf Life: Addressing the “Curation Crisis” through the Use and Reevaluation of Archival Collection Material

Compared to new archaeological data acquisition by traditional excavation and analysis, research and related funding associated with archival collections remains stagnant and is not proportional to the quantity of data present. This presentation highlights three cases of current research projects associated with the extant collections housed at the Cleveland Museum of Natural History, the Carnegie Museum of Natural History at Pittsburgh, and the Grave Creek Archaeological Complex, Moundsville, West Virginia. The first study leverages public archival records to fill in nationality data missing from the available demographic information for the Hamann-Todd Osteological collection, an essential step for reanalyzing the collection outside traditional racial categories. The second and third case studies showcase novel ceramic analysis techniques that are useful for large extant collections with poor documentation to demonstrate their viability as a reliable data source. The reanalysis in these cases shows that it is not only possible to add new results to existing excavation material, but previous outcomes can be reevaluated using new methods and theory. In all cases, the need for reevaluation of archival material is demonstrated through the discovery of misidentified material and underreported or missing data in published works.

Méndez, César (Centro de Investigación en Ecosistemas de la Patagonia), Amalia Nuevo Delaunay (Centro de Investigación en Ecosistemas de la Patagonia), Catalina Contreras (Independent Researcher), María Paz Quercia (Independent Researcher) and Bayron Soto (Universidad Austral de Chile)

[126]

Expedient Lithic Procurement at the Katterfeld Quarry-Workshop of Central-West Patagonia

The study of toolstone procurement in Patagonia is biased in favor of high-quality exotic materials—chiefly obsidian—often transported over large distances as heavily curated artifacts. Lesser-quality sources, however, may be important in the technological behavior at smaller scales (e.g., basin, subregion). The Katterfeld site is a ca. 73,000 m² siliceous shale quarry workshop located in the headwaters of the Ñirehuao River in central-west Patagonia. Its location above the tree line imposes seasonal access restriction. However, it stands as the largest and most intensely utilized site of this kind in the region. Our ongoing research includes the study of the geology of the area, understanding formation processes at a site level (mainly for addressing chronology), and the study of technology and taphonomy of the assemblage. Piece plotting over a 10,000 m² surface has revealed a total of 2,046 lithic artifacts showing the initial stages of lithic procurement, which occurred alongside other activities with short-lived tools. This paper discusses the Katterfeld workshop's record in terms of the expedient behavior represented at the site and

how it is different to other lithic assemblages in the basin/region, thereby highlighting the complementary nature of assemblages in central-west Patagonia.

Méndez, César [77] see Moreno-Meynard, Paulo

Mendez Bauer, Maria Belen (Universidad Nacional Autónoma de México)
[125]

Chair

Mendez Bauer, Maria Belen (Universidad Nacional Autónoma de México), Verónica Vázquez López (ENAH), Takeshi Inomata (University of Arizona) and Daniela Triadan (University of Arizona)
[125]

Aguada Fénix and the Middle Usumacinta Region: An Introduction

Among the many Middle Preclassic sites in the Middle Usumacinta region, Aguada Fénix is, by far, the largest and possibly one of the oldest. A large, rectangular platform was built at its center, measuring 1,400 × 400 m. The construction of this artificial plateau follows the tradition of horizontal monumentality established at the Olmec site of San Lorenzo and contrasts with later forms of monumentality, which are characterized by elevated pyramidal structures. Social inequality at Aguada Fénix appears to have been less pronounced than at other major sites to the west, such as San Lorenzo and La Venta. Unlike those Olmec centers, Aguada Fénix does not exhibit clear indicators of marked social inequality, such as sculptures representing high-status individuals. If these interpretations are correct, they imply that the Gulf Coast Olmec region was not the only center of cultural development and that innovations did not always emanate from the most hierarchical polities.

Méndez-Quirós, Pablo [77] see Uribe, Mauricio

Méndez-Quirós, Pablo [223] see Wande, Claudio

Mendoza, Rebecca (Harvard University)
[128]

Tree Resin in Mesoamerican Religion: Blurring Ontological Boundaries in Ceremony and Beyond

Copalli (copal) is an aromatic tree resin and a central figure in Mesoamerican ceremonies. Produced from various species of the *Bursera* genus, copalli is understood as the blood of trees and can be molded into figures or burned into thick clouds of smoke. Copalli is also portrayed as a food substance to be consumed by deities or a medicinal plant for human healing practices. At the Huey Teocalli (Templo Mayor) copalli is one of the most abundant materials in Mexica offering caches. In the Yucatán, hundreds of ceramic vessels of incense offerings were dredged from Chen K'u (Cenote Sagrado), pointing to the powerful presence of pom at Chichen Itza during the Postclassic period. Taking an interdisciplinary approach, this paper examines copalli and related materials (incense burners, altars, pictorial representations, etc.) to better understand the ecosystem of Mesoamerican religion. Specifically, I argue that the ritual consumption of copalli by humans, deities, fire, and water reveals its simultaneous durability and ephemerality while blurring ontological boundaries between plants, food, smoke, and blood. Attention to the presence of this resin in the archaeological record combined with analysis of divinatory codices offers insights into the nature of human and other-than-human relationships in Mesoamerica.

Mendoza, Rubén (CSU Monterey Bay)
[15]

From Carnage to Credentials: An Amerindian Archaeologist's Journey from Child Laborer to Professor Emeritus

After nine months my mother “broke her water” on June 18, 1956. Because my father was away, my mother walked the two hours from Stockton through agricultural fields to the hospital in Frenchcamp where I was

born. Despite my father's herculean efforts, we were caught in a seemingly interminable poverty. Upon entering graduate school at the University of Arizona, I'd already lived in several dozen small towns throughout the Central San Joaquin Valley and had from age 7 through 21 worked as a farm laborer, and for many more years as a "Mexican" gardener in the blistering heat of Bakersfield. At age 12, I was introduced to the works of my Amerindian ancestors in and about Mexico City. From that moment onward, I was smitten by the allure of my Yaqui elders, Indigenous archaeology, and Teotihuacan. As such, this presentation confronts the intersection of my Indigenous and Mexican heritage, familial poverty, and the sense of alienation that largely shaped my career pathway and areas of research and service. This fact has long limited my peer relationships and prompted me to gravitate to the margins of the discipline through a life experience largely left invisible to those about me.

Mendoza Cruz, Edgar [160] see Chagoya Ayala, Itzel

Mendoza España, Velia [158] see Capriles, José

Mendoza-Vega, Jorge [202] see Fedick, Scott

Menéndez, Lumila (FUMDHAM-INAPAS), Maria Clara López-Sosa (University of Bonn), Ana Solari (FUMDHAM-INAPAS), Sergio Monteiro da Silva (Universidade Federal de Pernambuco) and Anne-Marie Martin (FUMDHAM-INAPAS)

[3]

The Treasured Contribution of the Inner Ear to the Study of the Morphological Variation among Ancient Individuals from Brazil

Despite almost 200 years of debate, there are still crucial aspects that we do not fully understand in relation to the evolutionary history of South Americans. One of the major obstacles has been the limited number of available early Holocene skeletal samples with good preservation coming from the same region. In Brazil, there are two areas very rich in terms of the number of human burials from the early Holocene: Lagoa Santa (Minas Gerais) and Serra da Capivara (Piauí). Studies have been aiming at reconstructing the evolutionary history on two fronts: craniometric studies and aDNA analysis, but both have their limitations. In this presentation, we will share the preliminary results of the study of the morphological variation of a promising anatomical structure for reconstructing evolutionary history: the inner ear. We studied a sample of individuals spanning from the early to the late Holocene from different sites and localities in the northeast and central-east of Brazil (Serra da Capivara, Serra das Confusoes, Lagoa Santa, Pedra do Cachorro, Furna do Estrago; N-90). We will discuss the evolutionary implications of the biological affinities described here and propose an interdisciplinary framework for researchers working with human skeletons.

Menéndez Pereda, Alba (University of California, Los Angeles)

[193]

Solar Architecture and the Making of Inca Sacredness

Sunlight has long been curated within religious spaces to imbue them with a sense of sacredness and trigger a spiritual response among worshippers. The Coricancha was considered the most sacred temple in the Inca empire. Located in the capital of Cuzco and dedicated to the sun, this religious center exhibited a simple design in its form and layout. A unique sensorial experience was achieved through metal furnishings attached to the walls which resulted in light performances within the contained space. Made of gold, these reflective attachments not only redirected sunlight but, this material being associated with the sun, also served to summon sacredness, rendering visible the presence of the force to which Inca rulers attributed their ancestral origin. In this paper, I explore how Inca architects manipulated sunlight to center attention on the temple's courtyard and simultaneously impair visibility toward its perimeter. In contrast with the bright courtyard, the interior of the surrounding structures would have remained relatively dark therefore

constituting a more suitable setting to host private ceremonies. Thus, I analyze how the architectural management of sunlight as an ephemeral element played a critical role in the making of Inca sacredness.

Menkina, Ekaterina (University of Alabama), Scott Macrae (Trent University), Vo Thi Phuong Thuy (Vietnam Academy of Social Sciences) and Le Ngoc Han (Institute of Archaeology)

[289]

Drone-Imagery Sub Project in Hoa Lu, Ancient Capital of Vietnam

The drone-imagery sub project uses drone-based aerial photography and photogrammetry to document the water gates, walls, enclosures, canals, and shrines of Hoa Lu, supplementary to the IRAW@HoaLu settlement and survey research. Amid the urban-landscape development, the cultural and natural features are subject to time. Observation of the valleys and topography beyond the royal city center provides an insight on how people strategically make use of space and boundaries today and in the tenth century CE. This paper presents methodology used to capture the three ring systems, and the postprocessing of large-scale photogrammetry models. The visual guidance of the features bridges technology and preservation in archaeology. Discussion addresses the usage of open-source 3D software, results, and the future research prospects using 3D technologies in northern Vietnam.

Menkina, Ekaterina [289] see Macrae, Scott

Menz, Martin (University of Michigan)

[130]

Wetlands and Woodland Period Settlement on the Florida Gulf Coast

Most prominent Woodland period ceremonial centers along the Gulf Coast are located near wetlands, which provided access to a wide variety of resources for the hunter-fisher-gatherer populations who built them. Researchers investigating these sites often suggest that these rich environments created the conditions for increasingly settled lifeways, complex social organization, and communal labor projects. In this presentation, I discuss the role that rich and expansive wetlands of the Gulf Coast played in reducing constraints on settlement and enabling a variety of developmental trajectories for Woodland period ceremonial centers.

Meoni, Olivia [14] see Woehlke, Stefan

Merencio, Fabiana [178] see Bond Reis, Lucas

Mereuze, Remi (EHESS; UMR 8168 - Mondes américains), Julien Hiquet (CNRS - UMR 8215 ArchAm) and Hemmamuthé Goudiaby (CNRS - UMR 8215 ArchAm)

[61]

Integrating GIS and QField for Enhanced Archaeological Surveys in the Maya Lowlands: A Methodological Approach for the El Tigre Project

Archaeological research in the Maya lowlands is marked by its rich cultural heritage and challenging landscapes. Conducting surveys amid dense vegetation presents unique difficulties, which have been exacerbated by remote sensing during fieldwork preparation. To improve our survey methodology, we integrated GIS and QField, an open-source mobile mapping application, for the El Tigre project. This paper outlines our innovative approach, emphasizing the fusion of GIS technology and QField for spatial data collection, analysis, and visualization in the complex Maya lowlands. The objective is to enhance survey, deepening our understanding of the ancient Maya civilization and their interactions with their environment. Our methodology, successfully implemented in the last field season, significantly improved survey efficiency near El Tigre. Key components include comprehensive GIS data preparation, real-time data collection with QField, spatial analysis tools, seamless data integration, and interdisciplinary collaboration. We aim to

contribute valuable insights into innovative survey techniques. Beyond streamlining data collection, our approach promotes archaeological site preservation through detailed digital records. The GIS and QField integration has the potential to transform surveys in challenging landscapes worldwide. Ultimately, this research deepens our understanding of Maya civilization, settlement patterns, and environmental impact while pioneering GIS and mobile mapping technologies in archaeology.

Mereuze, Remi [168] see Dawson, Peter

Merino Andrade, Gabriel [320] see Marengo Camacho, Nelda

Merlo, Stefania [254] see Klehm, Carla

Mermejo, Richard

[84]

Picuris History: A Native Perspective

The new research reported in this session builds on collaborations between Picuris Pueblo and non-tribal archaeologists that began in 1960s. In this opening presentation, former Picuris governor Richard Mermejo reflects on the long history of his tribe's engagement with archaeology, his own vision of how future research might advance tribal priorities, and more broadly on the relationship between traditional Indigenous knowledge and scientific inquiry.

Mermejo, Richard [84] see Howard, Sully

Mermejo, Richard [84] see Ni, Jenny

Merriman, Ann (Maritime Heritage Minnesota) and Christopher Olson (Maritime Heritage Minnesota)

[154]

Minnesota's Dugout Canoes

Maritime Heritage Minnesota (MHM) has completed four Minnesota Dugout Canoe Projects that focused on 13 museum-held artifacts and one dugout canoe in situ in Lake Minnetonka. The artifacts were measured, photographed, drawn, and sampled for ¹⁴C dating. Two of the canoes underwent 3D analysis using a handheld scanner and underwater photogrammetry. MHM aligned the dugout canoes into a chronological series of Minnesota's oldest known watercraft, dating from AD 969; this process also determined one canoe dated to 1933. Probable cultural affiliations of the artifacts were determined using relative dating and construction attributes. The Dakota Unfinished Dugout Canoe Wreck in Lake Minnetonka (21-HE-557) was located by MHM volunteer Kelly Nehowig and recorded by video. MHM acquired a Minnesota Phase II Archaeology License to excavate the site in August and September 2021. When located, part of the site was protruding from a mix of silt, sand, gravel, stones, and weeds. MHM contends the exposed portion of the hull was uncovered by propellor washes that continue to put shallow wrecks at-risk. The dugout canoe is not finished and exhibits a variety of tool marks. MHM will present the findings of these projects including dugout canoe structural changes exhibited in the artifacts over time.

Merriwether, D. Andrew [24] see Gilleland, Sarah

Mery, Ibis (Universidad Nacional del Centro de la Provincia de Buenos Aires)

[220]

Los camélidos en el Ecuador: Estudio arqueológico faunístico y etnográfico

El tema zooarqueológico en el Ecuador sobre los camélidos es muy escaso especialmente en la región, solo algunos sitios reportan dicha especie, especialmente en la Sierra Norte, donde su presencia no es significativa, se presenta como un elemento especial o escaso. Nuestra investigación es entender el proceso de este animal en la prehistoria ecuatoriana, ya que existen muchos hiatos alrededor de presencia de las llamas en los diferentes periodos prehispánicos. Los enfoques para realizar en este trabajo estarán basados en una investigación comparativa de restos arqueológicos con actuales de diversos sitios. Donde a través de estudios básicos zooarqueológicos y posibles análisis de isotopos podremos entender como fue a la interacción entre esta fauna y los seres humanos.

Mesh, James [34] see Tzib, Frank

Mesia-Montenegro, Christian (Universidad Privada del Norte)

[27]

Chavín de Huántar and the Chronology of the Andean Formative Period in Lima

This paper evaluates 113 radiocarbon dates of 11 Formative sites located in Lima and assesses them considering the existing Chavín chronological framework. All dates were modeled using Bayesian statistics through OxCal to reassess the chronological range of the Formative period in Lima, while special attention is put on the site of Ancon and the U-shaped building tradition. I conclude that this tradition was popular between 1500 and 1000 BC (calibrated) and entered a decline process between 1000 and 500 BC (calibrated), which coincided with janabarroid ceramic spread in the central Andes. While the U-shaped building tradition was in decline, sites such as Ancon and Curayacu experience an intense flourishing, represented in the abundance of local and janabarroid ceramics in their archaeological stratigraphies.

Messinger, Emma (University of Pittsburgh), Bryan Hanks (University of Pittsburgh), Nicholas Suarez (University of Pittsburgh), Marc Bermann (University of Pittsburgh) and Claire Ebert (University of Pittsburgh)

[283]

A Multi-instrument Geophysical Survey for the Identification of Preclassic Ritual Deposits at Cahal Pech, Belize

The Preclassic (~1000 BC–AD 300) marked the appearance of increased sociopolitical integration and the emergence of inequality in the Maya lowlands. Over the course of the Preclassic, emerging elites invested in monumental construction projects and consolidated their ritual authority with ceremonial events, which occurred in large public plazas. As one of the earliest sites in the Belize Valley, Cahal Pech has been the focus of archaeological research to understand Preclassic ritual behavior and the establishment of kingship. During the 2019 field season, researchers conducted a multi-instrument geophysical survey of the largest public plaza at Cahal Pech using gradiometry, electromagnetic conductivity, magnetic susceptibility, and ground-penetrating radar. Excavations in 2022 targeted features identified by the geophysics survey, revealing a dedicatory cache consisting of a dense layer of chert flakes and debitage. Radiocarbon dated to 780–400 cal BC, this feature represents one of the earliest examples of a ritual lithic deposit from the Belize Valley. Our results illustrate the success of geophysical methods in locating ritual features in Maya plazas. Additionally, excavation data suggest that placement of caches likely played an important role in the development of the leadership strategies that persisted through the Classic period.

Messner, Tim (SUNY Potsdam)

[257]

Low-Tech in a High-Tech World: Teaching the Past to Shape the Future

For several million years our ancestors used tools to shape their world, and themselves. Some argue we have lost our way, as artificial intelligence and machine learning has reshaped the fabric of society. Our postindustrial, capitalist mode of production resulted in a nearly complete detachment from the sociocultural, environmental, political, and economic context in which things are produced. STEM-based solutions involve

greater investment in rare earth minerals and exploitative labor practices that have already driven the world into an anthropogenic doomscape we call the Anthropocene. Extinction rates are accelerating—not only of biota but also of lifeways. Included among these are the “traditional” skills and handcrafted technologies that offer a more balanced relationship between people and our world. Experimental archaeology and a craft-based pedagogy provides a mechanism to revitalize the low-tech lifeways that offer the potential for more sustainable futures. This presentation highlights the work currently being done at HEARTH—Hand-crafted, Experiential Archaeological Research and Teaching Hub. This unique public-facing facility, set within the SUNY system, not only prepares students for careers in archaeology and historic preservation but also encourages them to reconceptualize the relationships and systems that they want to be a part of.

Metcalf, Duncan [294] see Boomgarden, Shannon

Metcalf, Megan [57] see Evans, Amanda

Meyer, Brett (University of Michigan)

[74]

Discussant

Meyer, Brett [199] see Smith, Audrey

Meyer, Jana (University of New Mexico) and Keith Prufer (University of New Mexico)

[80]

Isotopic Investigations into Dietary Patterns of Early Medieval Communities in Thuringia, Germany

The Early Medieval period in Central Europe was a time of pronounced socioeconomic differences, as well as sociopolitical unrest. While the former Roman infrastructure was deteriorating, the costs of importing foods and other material goods into Thuringia increased, exacerbating differences in food availability between the various sectors of society, varying with individual and/or family wealth, and increasing the dependence on locally grown food for the general population. Using carbon and nitrogen isotopic ratios from long bone collagen (largely femoral or tibial diaphyses), we investigate the relationship between diet (animal protein consumption and reliance on C₃ vs. C₄ plants) and biocultural parameters: social status (indicated by burial goods and funerary practices), sex, and age in two Early Medieval communities from Thuringia. The sample consists of 79 individuals from Großvargula and Boilstädt, two nearby sites dating to the Merovingian period, and encompasses both males and females, as well as individuals of different ages. These cemetery sites show marked variation in the quality and quantity of burial goods among the interred individuals, suggesting a representation of different societal strata of the community, and allowing for a test of whether a higher or lower socioeconomic status affected dietary patterns within these communities.

Meyer, Michael (MoDOT)

[192]

Chair

Meyer, Michael (MoDOT)

[192]

Ending at the Beginning: Excavation of the Louis Beaudoin Site

In 2013 while conducting an archaeological survey for proposed interstate improvements, archaeologists with the Missouri Department of Transportation identified the remnants of an eighteenth-century French-style house. The identification of several post-in-earth wall trenches and a handful of period artifacts was monumental and changed the entire direction of the archaeological investigation. Over the subsequent years,

five additional French homes were identified and excavated, producing an ever-increasing amount of material and information. In 2018, during the final stages of the project and using lessons learned over the past five years, archaeologists returned to the Louis Beaudoin site to finish up where everything had started. A change in methods and approach not only produced a blizzard of late eighteenth- and early nineteenth-century artifacts but also identified the near-complete remains of the Beaudoin house. Prior conclusions concerning building construction and site use were set aside as new data demonstrated how the Beaudoin property differed from others in St. Louis and from comparable communities in Upper Louisiana.

Meyer, Regina

[326]

Methods of Geophysical Testing

The Lockhart cemetery is located within the Missouri Army National Guard's Macon Training Site, Macon, Missouri. The cemetery is located within the eastern half of Site 23MC1586, a site recorded within the northwest section of the Macon Training Site. The western half of the site has foundation remains with historic deposits dating to the mid-nineteenth century. Utilizing archaeological surveys, historical records, and geophysical surveys, the project speculated that unmarked historic graves were located outside of the marked historic cemetery boundaries and that the marked graves had never been exhumed from the military property. This paper will discuss dual methodologies for geophysical surveys and its results for identifying marked and unmarked historic graves within the radius of the Lockhart Family historic cemetery.

Meyering, Lisa-Elen (Leibniz-Zentrum für Archäologie [LEIZA]), Jerome Robitaille (MONREPOS, LEIZA, Germany), Paul Pettitt (Durham University, UK), Robert Kentridge (Durham University, UK) and Sabine Gaudzinski-Windheuser (MONREPOS, LEIZA, Germany)
[141]

Citizen Science and Paleolithic Art: Investigating the Visual Psychological Background to 15,800-Year-Old Engravings Online

We present findings from our Citizen Science-focused project that combines Pleistocene archaeology, traceology, and visual psychology experimentation to offer new perspectives on Ice Age art. Our project visually explores the content and wider context of the 15,800-year-old German Gönnersdorf/Andernach Upper Paleolithic engraved plaquettes (portable schist), which feature depictions such as female-like anthropomorphs, mammoths, and woolly rhinoceros. Here, we will showcase our Citizen Science project website, which engages the wider public in visual psychological experiments, including webcam eye-tracking when inspecting Upper Paleolithic art. One of our experiments tests participants' susceptibility to pareidolia, a phenomenon that makes our eyes (brains) see things that are not physically there. Another lets people place art onto a blank plaquette canvas at a place of their choosing, which is then compared against the corresponding archaeological record. Our overall data from these studies reveals how participants with different sets of backgrounds, such as total novices (no experience with UP art) and those that consider themselves Ice Age Art "experts," perceive and engage with artistic markings of the past. Collectively, they enable us to shed new light onto our perception and the holistic function of Ice Age art.

Meyering, Lisa-Elen [93] see Robitaille, Jerome

Meyers, Maureen (New South Associates Inc.)

[82]

Chair

Meyers, Maureen (New South Associates Inc.)

[82]

Economy of Production: A Theory of Household Labor Organization and Material Reuse

Although studies of household economies in archaeology are abundant, one area that has not been examined

is the economic use of materials, space, and labor and how this affects household economy and organization. Understanding how culture define thrift and waste would help us understand household economies more precisely. Related, many household domestic economies are managed by women. Examining how women within these economies adhere to cultural definitions of thrift and waste allows for a more complete understanding of gender relations in households and recognizes the importance of women's labor in household economies. In this paper I argue household economies need to be examined for economic uses of materials, space, and labor, and identification of such economic use in archaeological contexts is possible. I show that women engaged in a culturally defined economy within one particular household engaged in craft production at a southeastern Mississippian chiefdom. Through an economic use of materials, space, and labor, the inhabitants of this household increased their power over time. In examining material evidence of an economy of production archaeologists and anthropologists can more specifically identify the focus of household economies and cultures as a whole and the role of women in those households and cultures.

Meyers, Maureen [279] see Doubles, Catherine

Meyers, Stephanie (University of Cincinnati), David Lentz (University of Cincinnati), Christopher Carr (University of Cincinnati), Nicholas Dunning (University of Cincinnati) and Kathryn Reese-Taylor (University of Calgary)

[31]

Forest Resources at Calakmul Based on Modern Forest Surveys and Lidar Assessment

Forest resources supported a sizeable population at the Maya city of Calakmul for centuries. This study addresses questions about maximum potential carrying capacity based on aboveground biomass (AGB) production and the diversity of ethnobotanically significant forest species. AGB of the modern forest was calculated by both modern vegetation surveys and lidar returns. Because sectors within the forest varied in AGB, a spectral classification of satellite images was used to determine distribution of vegetation communities. The forest resource extractive zone of Calakmul, the area where inhabitants would have collected wood for fuel, timber, and other essential resources, was defined by a Voronoi diagram based on archaeological settlement data. The Voronoi diagram was superimposed over satellite images to determine the total AGB for the resource extractive zone. Based on forest growth data, pollen profiles revealing ancient forest clearance and assuming sustainable wood consumption, AGB available for annual consumption was estimated. In addition to wood, inhabitants would have relied on the forest for food, medicine, and other essential needs. An assessment of species composition and prevalence of ethnobotanically significant woody species in the modern forest revealed a broad spectrum of non-timber forest products likely available to the ancient Maya.

Meyers, Stephanie [31] see Lentz, David

Meza Rodriguez, Carolina [273] see Jurado, Erik

Micarelli, Ileana (McDonald Institute for Archaeological Research University of Cambridge)
[233]

Weaving a Complex Past—Longobards in Italy: A Population on the Move in the Early Medieval Times

The migration of the Longobards to Italy represents one of the most significant events of the Early Middle Ages regarding the sociopolitical unity of the peninsula. As reported in *Historia Langobardorum* by Paul the Deacon, in 568 CE, Longobards crossed the Italian boundary to occupy its territories. From this moment, the interaction with the inhabitants and land use began. The necropolis of Povegliano Veronese (northeastern Italy) dates to the first phases of the migration and the following one, namely between the sixth and the eighth centuries AD. The skeletal collection will be defined as a biological archive that registers the biological and cultural biography of a population. From this perspective, the bioarchaeological investigation examines levels of considerable complexity within our understanding of past societies. Following the methodologies

present in the literature, the social environment of Povegliano Veronese will be discussed based on the health status (paleopathological analyses; i.e., osteoarthritis, metabolic and oral diseases) and multi-isotopic analysis (diet and mobility). The results will point out the consequences of economic and social differences to the important role of economic inequality in defining disease and diet variability outcomes. The presentation will not contain images of human remains.

Michael, Amy [268] see Howey, Meghan

Michaels, Jay [293] see Witt, David

Michalski, Matthew (University of Michigan), Brendan Nash (University of Michigan), Thomas Talbot (Belson Project), Henry Wright (University of Michigan) and Elliot Greiner (University of Michigan)

[41]

Multiple Clovis Occupations at the Belson Site: New Data for Testing Foraging Models from Southwest Michigan
Excavations at the Belson site in southwest Michigan have revealed at least two stratified Clovis occupations below the plowed deposit. These data provide a rare opportunity to test foraging models against data from each occupation. With lines of evidence such as chert sourcing, technological analysis, and proteomics, we can begin to understand how foraging behaviors may differ or remain consistent from year to year. Initial sourcing of chert via minerals and microfossils, indicates that people are procuring resources from as far as 600 km to the south; however, by far the most common chert in the Clovis deposits is from Attica, Indiana, about 280 km south. Initial study of ancient proteins from chert tools suggests a broad spectrum foraging behavior, with four different taxa identified on three tools, providing evidence against the traditional model of being megafauna specialists. Future analysis will focus on more rigorous model testing and formulation, including data from additional excavations.

Michelaki, Kostalena (School of Human Evolution and Social Change, Arizona State University)

[162]

Discussant

Michelaki, Kostalena [46] see Chesson, Meredith

Michelaki, Kostalena [46] see Ullah, Isaac

Micheletti, George (University of Central Florida)

[74]

Discussant

Mihailovic, Bojana [247] see Kuhn, Steven

Mihailovic, Dušan [247] see Kuhn, Steven

Mikulska, Katarzyna (University of Warsaw)

[79]

A Sacrificial Graphic Pattern? Analysis of the “Curved Like Obsidian” Pattern in Images of Itztlacoliuhqui and Other Nahua Gods

The aim of this paper is to analyze the meaning encoded in the “curved like obsidian” graphic pattern present in the cap and face of Itztlacoliuhqui, the Nahua god of frost. Though supposedly it is a pattern that encodes “obsidian,” the sacrificial obsidian knives are painted in a different way. On the other hand, some more deities or beings have the same pattern painted on their faces, so, according to the rules of the construction of gods in prehispanic central Mexico, it indicates that they share common feature(s) or function(s), that in this case seems to be connected with sacrifice. Itztlacoliuhqui is also a sacrificed god, and one of his manifestations is in the form of a mortuary bundle. The meaning of the pattern and related subjects will be explored mainly on the basis of analysis of representations of gods in divinatory Central Mexican codices, particularly in the so-called Borgia Group.

Milburn, Zoe (University of West Florida)

[100]

NAGPRA 2.0? Comparing the Proposed Rule to the Law

On October 18, 2022, the Department of the Interior published the Proposed Rule (87 FR 63202) seeking to revise the Native American Graves Protection and Repatriation Act (43 CFR 10). Modifications include the introduction of clearer timelines and terminology, an emphasis on forthright and effective consultation with stakeholders, and addressing problems identified in the 1990 NAGPRA law (87 FR 63202). This poster will outline and compare the 1990 legislation and the 2022 Proposed Rule, while considering the potential outcomes of the changes. A clearer understanding of the major changes within the Proposed Rule on the implementation of NAGPRA is essential given the prevalence of NAGPRA cases across the US that remain unresolved for issues like, “culturally unidentifiable” objects. Finally, the presentation provides the opportunity to participate in student-led survey research focusing on real or perceived barriers in NAGPRA compliance. No human remains will be included in this presentation.

Milek, Karen [48] see Speller, Jeffrey

Miles, Aimee [179] see Levin, Maureece

Miles, Natalia [108] see D’Elia, Ashley

Milks, Annemieke (University of Reading) and Rob Hosfield (University of Reading)

[138]

Choose Your Weapon: Material Selection for Middle Pleistocene Spears

The earliest archaeological weapons consist of one-piece wooden spears and throwing sticks from the Middle Pleistocene. These earliest weapons were made by late *H. heidelbergensis* and/or early *H. neanderthalensis* and were crafted from coniferous wood from at least 400,000 BP. They are typically associated to large prey, but the throwing sticks represent the technological capability to hunt smaller terrestrial and avian fauna.

Preserving only in exceptional contexts, they highlight the significance of organic materials for early weapons. In Africa, stone points were thought to be used to tip spears as early as 500,000 BP, while in Eurasia they appear as early as 230,000 BP. Yet, wooden spears are not replaced by stone-tipped weapons and continued to be used for hunting and violence. I will share preliminary results of an archaeological review of evidence of Middle Pleistocene weapons including stone points thought to tip spears, associating sites with data ecology, climate, and prey. The innovation of the use of inorganic materials for weapons, alongside persistence of organic materials pose not only “economic” questions but also those concerning social and ideological relationships between these early humans, their natural environments, materials, and prey.

Millán-Pascual, Rafael (Institute of Heritage Sciences [CSIC])**[28]***Landscaping against the People: An Archaeology of the Francoist Industrial Forestry in Spain*

In this contribution we combine landscape archaeology and the archaeology of the contemporary past to critically rethink the material, social, and ideological effects of the industrial forestry developed by the dictatorship in Spain. This case is a particularly relevant example to reflect on how the transformation of the landscape is one of the most durable and successful resources at hand for totalitarian regimes in order to modify the memory of their social, political and material consequences. The industrial forestry was part of large-scale operations developed by the Francoist regime in his quest for the material construction of his ideal Spain. That resulted in the transformation of extensive rural areas where the people was literally changed by trees. The progressive rising of the pines converted many villages into a forest, destroying its historical landscape and concealing its remains. Today, the forestation process reveals its strategic functionality for the dictatorship in the long term, since the forestry policy is one technique of “naturalization” of old peasants’ places and so of the political actions that changes those lands. We will see how the industrial forestry was here an agent of forced migrations, the abandonment of lands as much as one way of oblivion.

Miller, Bryan (University of Michigan)**[23]***Discussant***Miller, Bryan (University of Michigan)****[56]***States of Mobilities: Nomadic Institutions as the Foundations of Large-Scale Polities*

Theories surrounding the rise of complex polities have long hinged upon large urban centers, fixed infrastructure, and the centrality of agricultural economies, leaving any societies without these as incapable of creating stable large-scales collectives that one could call a state. Taking the case of the first steppe empire, the Xiongnu (ca. 200 BCE–100 CE), this paper argues (1) that pastoralism can be a stable economic basis for a political economy and can provide institutional foundations for intensification of production and the maintenance of surplus, and (2) that mobility, being a strategy for community adaptability in response to shifting ecological or political circumstances, was not the antithesis of governance but rather could foster large-scale communication, exchange, and mobilization of resources to adeptly overcome the purported tyranny of distance. I propose a concept of states of mobilities, in which the political economies that bolstered these regimes hinged on the control not so much of static territories of resources but more so of the movements of numerous and diverse resources, including raw materials, labor, products, soldiers, administrators, and knowledge.

Miller, Christopher [45] see Skowronek, Russell

Miller, D. Shane (Mississippi State University)**[253]***Chair***Miller, D. Shane (Mississippi State University), Ashley Smallwood (Mississippi State University), Philip Carr (University of South Alabama), I. Randolph Daniel (East Carolina University) and Jesse Tune (Texas A&M University)****[253]***Big Data and Late Pleistocene / Early Holocene Landscape Use in the American Southeast*

The early record of the American Southeast is best characterized as consisting of relatively few stratified, dated sites, yet an abundant surface record. In this paper, we discuss the pioneering work of David Anderson,

who has spent a career cobbling together large datasets from academia, cultural resource management, and avocational archaeologists to address “big questions” in novel ways. Finally, we discuss how his research, mentorship, and collaboration has influenced a subsequent generation of research on the early archaeological record of the region.

Miller, D. Shane [211] see Nichols, Andrew

Miller, D. Shane [211] see Osterholtz, Anna

Miller, D. Shane [67] see Perrotti, Angelina

Miller, D. Shane [82] see Smallwood, Ashley

Miller, D. Shane [253] see Yerka, Stephen

Miller, Hollis (SUNY Cortland)

[136]

Chair

Miller, Hollis (SUNY Cortland)

[136]

Belongings as Archives: An Abundant Approach to Sugpiaq Archaeology

The historian Tiya Miles argues for an abundant approach to history, in which researchers learn to excavate absences in the historical record instead of allowing those silences to stand. *Belongings* (a.k.a. artifacts or objects) are additional archives that contain the stories, energies, and contexts in which they were made and used. As part of my work with the Old Harbor Archaeological History Project (OHHP), I use object-centered vignettes as an abundant approach to the recovery of Sugpiaq stories from the Russian colonial period in Alaska, which lacks documentation from a Sugpiaq perspective. OHHP is a community-based participatory research program exploring the strategies of persistence and survivance among Sugpiaq communities in the southeastern Kodiak Archipelago during the period of Russian colonialism. Here I present close examinations of ulus, beads, and a ceramic vessel alongside standard analyses of artifact assemblages from the Ing'yuuq site to interpret the lifeways of Sugpiaq ancestors during this tumultuous period of their history. While Sugpiaq ancestors faced immeasurable loss due to Russian colonization, these combined analyses of belongings show how they also leaned on each other for support, created well-crafted tools and adornments, made families, and maintained their relationships to land and sea.

Miller, Hollis [99] see Heigel, Darren

Miller, Hollis [99] see Pamplin, Erin

Miller, Kyra (Rutgers University, Camden), Carla Cugini (Rutgers School of Dental Medicine), Anna Dhody (Mütter Research Institute) and Kimberlee Moran (Rutgers University, Camden)

[123]

Detection of Yellow Fever Virus in Human Remains Using Mass Spectrometry-Based Protein Analysis of Dental Pulp

The goal of this project was to determine if the yellow fever virus (YFV) could be detected in historic remains by analyzing the proteins found in the dental pulp of the remains. Typical YF diagnostic techniques rely on blood or liver tissue so when these tissues are not recoverable, YF detection is currently limited. In order to meet the objectives of the study, a retrograde collection method was used to extract dental pulp on modern teeth and will be used on teeth from a known yellow fever victim and teeth from a historical cemetery site. The three different populations serve as a negative control, positive control, and the unknown population for the purpose of yellow fever detection, respectively. Following the dental pulp extraction, the pulp was subject to a protein extraction methodology and was analyzed via liquid chromatography-mass spectrometry (LC-MS). The aim of using mass spectrometry technology is to detect both blood proteins (to validate the dental pulp extraction method) and to detect YF specific proteins (with the capsid protein being the primary protein of interest). If YF fever specific proteins are detectable in the dental pulp, this research could prove valuable for the fields of archaeology and paleomicrobiology.

Miller, Mel (Algonquin Consultants Inc.) and Danielle Macdonald (University of Tulsa)
[337]

A Low-Cost Method for Measuring Ridge Width on Lithic Artifacts for the Purpose of Evaluating Artifact Condition

To reconstruct the life history of an artifact one must understand how the tool was made, used, but also what happened to the artifact after it was discarded. For stone tool analysis, evaluating lithic artifact condition helps reconstruct this life history through insight into site exposure, assemblage integrity, and postdepositional processes. Multiple studies have used ridge width on lithic artifacts to determine artifact condition for several different raw materials. Presented here is a method for measuring lithic artifact ridge width using digital microscopy and Adobe Photoshop. This method is a cheap and quick way to evaluate artifact condition on single artifacts, and at an assemblage-level could prove useful to researchers traveling overseas or packing lightly for the field. It would also be useful for archaeological laboratory technicians, cultural resource management firms, students, and those who cannot afford more expensive research methods.

Miller, Myles [326] see Wurtz Penton, Michelle

Miller, Sarah

[238]

Moderator

[64]

Discussant

Miller, Sarah [254] see Rubinson, Samantha

Miller-Camp, Jess [89] see Richter, Kristine

Miller-Sisson, Misha (Chronicle Heritage)

[108]

Riparian Protection and Restoration as a Necessary Mitigation Practice

When looking at the cultural landscape archaeological surveys often only consider the direct effects that construction projects have on observed cultural resources. Secondary effects such as erosion from construction activity, building usage, and waste deposition are often ignored. Disturbances to the seven aspects of site integrity often ignore effects that occur outside of the construction footprints. Consideration for the processual and causal elements of the construction process, as well as the overall alteration of the landscape by the additional and new usages caused by construction should be considered for proper protection of both observed and unobserved cultural resources, especially precontact resources. In this poster we address the unintended damages and changes wrought on cultural resources by the unplanned but inevitable degradation to the surrounding landscape by construction activities, and how to reduce and negate some of these effects through the protection, maintenance, and restoration of riparian areas focusing on landscapes in the Columbian Plateau.

Miller Wolf, Katie (University of West Florida), Enrique Rodríguez-Alegría (University of Texas, Austin), Kristin De Lucia (Colgate University) and Meagan Pennington (University of West Florida)

[246]

Canaries in the Coal Mine: How Children Reveal the Embodied Realities of Colonialism

Childhood is paradoxically the most precarious yet vital period of a person's life. It is when children form their biological and social self, embodying everything around them. However, what surrounds them may not

be safe, stable, or congruent with a healthy, long life. Children are the first to embody and succumb to the effects of sociopolitical change, economic insecurity, or environmental disruption and this is particularly apparent in societies undergoing forced ideological or political transformation. Colonialism and imperialism have been shown to increase the morbidity and mortality of the communities being subjugated. This paper examines the embodiment of colonialism as seen in the remains of children recovered from the sixteenth-century colonial church cemetery in Xaltocan, Mexico. A contextualized bioarchaeological analysis reveals the stories of Xaltocameca children who were the canaries of the new society wrought by the long arms and nails of Spanish colonialism. Adolescents and adults who survived childhood still carry the scars of their lived, embodied experiences in youth. Social practices and cultural transmission were remade during colonial incursions into indigenous communities and the skeletal remains of the Xaltocameca reveal the realities of living in a colonized space. ***Images of human remains may appear in this presentation.

Miller Wolf, Katie [246] see Halperin, Christina

Millhauser, John (North Carolina State University), Kristin De Lucia (Colgate University) and Enrique Rodríguez-Alegría (University of Texas, Austin)
[50]

Fifty Shades of Gray . . . Obsidian: A Tale of Supply, Demand, and the Ties that Bind at Xaltocan, Mexico
In central Mexico, where obsidian was the primary toolstone used by Indigenous peoples, one can get a good sense of sources by separating green obsidian (from Pachuca) from gray obsidian (from Otumba, Ucareo, and several other sources). Compositional analysis can further clarify the gray sources. Over a decade ago, the Elemental Analysis Facility at the Field Museum began training archaeologists in the application of portable X-ray fluorescence spectrometry to source obsidian. In collaboration with the EAF, we conducted a small study of 103 obsidian artifacts from Xaltocan, Mexico, dating from about 900 to 1700 CE. About half of these artifacts were green and half were gray, black, red, or brown obsidian that could not be linked to a known source without compositional data. For the present study, we returned to Xaltocan with improved instrumentation, a better sense of chronology, and a more substantial sample of 898 additional obsidian artifacts of which 99% are gray or other uncommon colors. Our findings demonstrate the stability of supply networks and markets well into the colonial period as well as the homogenizing tendencies of the Aztec market system.

Mills, Barbara (University of Arizona) and Kelsey Hanson (University of Arizona)
[56]

Networks of Power in the Chaco World: Practices, Institutions, and Ideologies of Collective Action
In 2006, Lynne Sebastian synthesized political models used for Chaco society and argued that past interpretations were too heavily reliant on outdated models that stressed hierarchy and neo-evolutionary typologies. She especially drew on Susan McIntosh's (1999) book *Beyond Chiefdoms: Pathways to Complexity in Africa* and argued that power should be looked at in relational terms and that "wealth in people" rather than material wealth was more important in Chaco's development. We revisit Sebastian's argument and the models presented in McIntosh's volume to make the case for a historical-relational perspective on the Chaco World that includes the networks of practices, institutions, and ideologies through which power was created and used. We focus on three primary institutions: matrilineal households, ritual sodalities, and pan-village alliances or councils that contributed to Chaco's complex organization. Each of these groups drew on material and immaterial resources to accomplish their goals such as charismatic species, colorful pigments, and long-distance goods that we argue were essential for attracting people. Such an approach opens up the interpretive arena on Chaco governance to include a wider variety of ways in which decision-making and leadership was structured that accounts for large-scale collective action over multiple social and spatial scales.

Mills, Blair [174] see Kulisheck, Jeremy

Mills, Cassandra (HNTB) and Leo Demski (University of Nevada, Reno)**[140]***Contaminated Consumption: An Archaeological Examination of the Consequences of Adaptation in Industrial and Illicit Alcohol Production in the Southeastern United States*

The economic and communal importance of alcohol production across the southeastern United States can be traced from colonization to the present day. From colonists' advertisements for wives who could brew beer, to moonshiners outrunning revenueurs and Alcohol, Tobacco, and Firearms agents, to distillery-based tourism in the present day, alcohol production has sustained lives and livelihoods, becoming an embedded tradition throughout the region. Alcohol is the center of many community anxieties, constructed narratives, and targeted surveillance and policing. Archaeological investigations of alcohol production sites present colonists and homesteaders striving to survive in new landscapes, vast networks of illicit production and trade, and the adaptability of the alcohol industry during and after Prohibition. In this paper, we explore how the material culture of alcohol production and consumption in the southeastern United States both coincides with and contradicts historic narratives of these activities. We specifically focus on the transition periods into and out of Prohibition, examining how cultural narratives between legal and illicit alcohol display communal anxieties about race, gender, class, and health while erasing the diversity, agency, and contamination involved in production, distribution, and consumption of alcohol.

Mills, Conan (Louisiana State University)**[104]***Digital Archaeology at Sites 16VN3504 and 16VN3508 in Western Louisiana: Digital Preservation in the Face of Climate Change*

Digital archaeology provides opportunities to help safeguard and disseminate archaeological knowledge in the context of climate change. As environmental shifts intensify, archaeological sites are increasingly at risk, necessitating urgent measures to protect their invaluable information. Technologies such as 3D photogrammetry, lidar, and geographic information systems can be employed to digitally capture and archive site information, while being low cost and limiting field crew environmental exposure. Digital preservation not only conserves data but allows for remote access and mitigates physical exposure risks. Hurricanes cause a loss of information by damaging archaeological sites through flooding, erosion, and tree falls. Given the changing climate, it is vital to conserve and share archaeological information. Online repositories and interactive platforms democratize access, enabling researchers to engage with archaeological data regardless of geographic constraints. This poster shares a case study from two large multicomponent sites, 16VN3504 and 16VN3508, in the Kisatchie National Forest of western Louisiana. Digital archaeology techniques were used to document the sites, both impacted by tree falls from Hurricanes Laura and Delta, as well as ongoing looting. Stakeholders can leverage digital tools for public engagement, navigate the challenges of climate change, and foster preservation of our shared cultural heritage.

Milner, George (Pennsylvania State University)**[253]***Food, Conflict, and Mortality: Millennia-long Trends in the American Midcontinent*

There is nothing new about saying that the indigenous societies of the American midcontinent underwent significant changes during the several millennia prior to the arrival of Europeans. But lacking quantitative assessments of subsistence practices, intergroup conflict, and mortality patterns, among other topics, systematic evidence-based understandings of what took place and why it did so are greatly impoverished. Data assembled from numerous midcontinental sites clarify relationships among the intensification of subsistence practices (plant remains), differences in the intensity of intergroup conflict (human skeletons and defensive works), and changes in age-independent mortality (skeletons). During the Middle Woodland period two millennia ago, a time of impressive earthwork construction and the interregional exchange of symbolically charged objects, a stepwise shift in native plant cultivation accompanied declines in conflict and age-independent mortality. Less than a millennium later, and despite a further rapid shift to a heavy reliance on maize, both warfare and age-independent mortality increased. The mortality measure is an indication of

the effect on communities of changes in ways of life, in this instance subsistence practices and intergroup relations. Assembling such information is a fitting tribute to David Anderson because it is precisely what he has done so often and well.

Milosavljevic, Tania

[183]

A Paleoethnobotanical Comparison of Mortuary and Village Langford Tradition Sites in Northern Illinois

The last 40 years have seen increasing methodological sophistication providing for a relatively nuanced understanding of food technology and resource use. Paleoethnobotany is one way to observe the diversity of plant use among Langford site occupants. Using standard paleoethnobotanical practices, plant macroremains from the Robinson Reserve Site (11CK2) are analyzed. Results of the plant macroremain analysis are then compared to existing floral data from the Washington Irving site (11K52). This research investigates whether site functionality is distinguishable between Langford tradition mortuary and village sites.

Milot, Jean [50] see Dussubieux, Laure

Milton, Emily (Michigan State University)

[282]

Yes, You Ken! A Guide to Creating Your Own Water Isotope Baseline

How many water samples are Kenough? If you are Ken-fused about how to make your own, robust isotopic reference dataset for archaeological questions, this poster is for you. My job is baseline. At the beach, in the mountains—and everything in between. This poster reflects seven years of Ken-curious environmental isotopic sampling in the western Central Andes of Peru. I Ken-splain how to develop your questions and collect isotope samples [that are so cool] to support your research. You don't need a faux mojo mink (though it's encouraged), you just need some vials, electrical tape, and a phone. This guide will walk you through issues like fractionation processes (what?), possible variations among water sources (like canals, rivers, and wells), and temporal change. To ensure you're great at doing [this] stuff I will also answer existential questions about sample acquisition, air bubbles, filtration, quality control, and horses. No more analytical or Blonde fragility—your research will be a 10. Just like Ken.

Milton, Emily [171] see Schwarz, Victoria

Mina, Maria

[18]

Cave of Wonder: A Sacred Topos of Maritime Identities on Kalymnos

Caves often occupied prominent locations as visible landmarks or as nodal points in exchange networks and mobility routes. The paper discusses coastal sacred caves, which through the transportation of diverse material culture, provided the backdrop where maritime identities were played out. The study investigates the Late Minoan occupation phase of Daskalio Cave on Kalymnos Island to shed light on the use of coastal caves in connection to maritime travel in the prehistoric south-east Aegean. It is proposed that Daskalio Cave, which occupied a nodal position between the insular Aegean and the Anatolian mainland, was visited by maritime travelers. The evidence indicates the performance of ritual activities with clear references to Minoan cultural practices, which were emmeshed with local traditions, as attested by the presence of local pottery wares and shapes. The paper concludes that the coastal location of Daskalio Cave, its access by sea and the presence of imports, may suggest a close connection with maritime travel and seafarers for whom the cave may have marked a sacred landmark or a site of pilgrimage. It is also proposed that coastal caves that occupied liminal spaces, environmentally and symbolically, served as spaces where mobility and cultural exchanges created distinct maritime identities.

Minette, Ellie (University of West Florida)**[100]***Promoting Engagement and Interaction: How Local Museums Can Use Digital 3D Models*

With the increasing accessibility of digital technologies, photogrammetry and digital modeling have grown in popularity and applicability as archaeological tools. Recently, archaeologists have used digital models of sites and artifacts for various teaching and research purposes, with specific emphasis on 3D-printed replicas and augmented-reality content. Less attention has focused on how local museums can use digital models to enhance community engagement, education, and overall outreach efforts. Through the process of modeling sixteenth-century Spanish artifacts from the Pensacola Museum of History and the Archaeology Institute at the University of West Florida in collaboration with the Florida Public Archaeology Network, the goal of this research is to identify how local museums can integrate these artifact models into their preexisting infrastructure through museum websites or create new pathways for engagement and expression via social media platforms.

Mink, Kirsten (Idaho State University), Anna Novotny (Texas Tech University) and Gabriel Wrobel (Michigan State University)**[295]***Bona Fide: Advances in Ancient Maya Bioarchaeology from Belize*

Bioarchaeological studies have taken a central role in developing our current understanding of the sociopolitical and economic organization of the ancient Maya. This is in large part due to advances in methods and theory that allow a deeper contextualization of the biocultural processes in which human groups were enmeshed. Advancements in paleogenomics and biogeochemistry have drawn attention for the unprecedented interpretations they allow us to make about paleodemography, diet, and mobility (Ebert et al. 2021; Freiwald 2011; Green 2016). The bedrock of Belizean bioarchaeology, however, remains grounded in macroscopic analyses of human skeletal and dental remains. Contributions to biological profile estimation, paleopathology, body modification, complex mortuary contexts, and taphonomy from Belizean datasets shape our understanding of the biocultural aspect of the lived Maya experience. Bioarchaeological work in Belize also urges the field forward by incorporating unique theories such as identity creation (Geller 2014; Piehl 2006), life course and history (Wrobel and Cucina, in press), and queer theory (Nissen 2015). The growth within the field of bioarchaeology, spearheaded by work in Belize, will continue to allow researchers to better use the osteological and dental data to inform the social, economic, and political narrative of the Maya in Belize and broader Mesoamerica.

Mink, Philip (University of Kentucky, W.S. Webb Museum Anthropology), Michael Detisch (University of Kentucky), Jacob Coffey (University of Kentucky) and Alan Sullivan III (University of Cincinnati)**[41]***Recent Geochemical Analysis of Ceramics from the Upper Basin Region of the Baaj Nwaavjo I'tah Kukveni Grand Canyon National Monument*

This poster presents the results of recent geochemical analysis of ceramics and other clay artifacts in the Upper Basin Region of the Baaj Nwaavjo I'tah Kukveni Grand Canyon National Monument. We will compare the geochemical composition of Tusayan Grayware and San Francisco Mountain Grayware sherds, acquired by portable X-ray fluorescence (pXRF), to the composition of daub collected from a nearby excavated masonry ruin. We also compare our recently collected pXRF data with benchtop XRF data collected on the same sherds over a decade ago. Finally, we explore the use of both scanning electron microscopy with energy dispersive spectroscopy and scanning micro-XRF to evaluate the effectiveness of these methods for future nondestructive geochemical analysis of ceramics.

Minor, Elizabeth (Wellesley College), Sarah Schellinger (Ohio State University), Christopher Sevara (Newcastle University), Hannah Herrick (Simon Fraser University) and Ahmed El-Hassan (Sokhari) (Sudan National Corporation for Antiquities and Museums)

[55]

Community Resilience and Connection on the Middle Nile: The Es-Selim R4 Archaeology Project in Sudan

The community archaeology project at the Kerma settlement site of Es-Selim R4 (ESR4) seeks to investigate how environmental, social, and political change intersect to affect a provincial population center over 1,000 years. The site is located in the Northern Dongola Reach, where the floodplain was braided with Nile paleochannels, supporting a network of settlements. Our initial community engagement in 2020 provided insight into how people living in the area relate to past remains of human activity in the landscape and what they want to better understand about past residents and environmental conditions. Community members identified questions about the ancient environment and subsistence strategies as a high priority, as our research results can inform their choices as they face climate change today. During 2021–2023, we continued to build relations with the residents through surveys disseminated with the assistance of the Sudanese National Corporation for Antiquities and Museum collaborators. Our initial findings and future goals presented here are based on the results of these surveys. They include insights into the level of public interest in the ancient Nubian past, how residents and tourists interact with ancient sites today, and how they hope to learn more in the future.

Mion, Leïa (Cardiff University), Hongjiao Ma (Cardiff University), Peter Guest (Vianova Archaeology & Heritage Services), Angela Lamb (British Geological Survey, UK) and Richard Madgwick (Cardiff University)

[334]

Exploring Roman Army Supply Networks on the British Frontiers: A Multi-isotope Approach

How did the Roman Empire supply its very large frontier garrisons? Maintaining provision was key to the success of Roman imperialism, but we still know remarkably little about how Romans soldiers on the frontiers were supplied and the impact this had on the provincial countryside and its population. This paper presents results from the project “Feeding the Roman Army in Britain,” funded by the Leverhulme Trust. A multi-isotope approach is applied to domestic fauna from 16 sites in three frontier regions of Britannia: South Wales, Hadrian’s Wall and the Antonine Wall, to explore the networks of supply and husbandry strategies that supported the army. Almost 500 animals have been analyzed for strontium, carbon, nitrogen, and sulfur isotopes. Preliminary results show species-specific landscape use and husbandry practices and suggest that, in some instances, resources were mobilized from a wide network. These results are embedded in the archaeological, historical, and environmental context to enrich our understanding of Roman supply strategies.

Miovich, Luciana [243] see Sanchez Garcia, Julio

Mirro, Mike [164] see Spenard, Jon

Misra, Shikha (Chronicle Heritage) and Bryn Sullivan (Chronicle Heritage)

[108]

Archaeology and the Colorado River: Environment and Cultural Management

A rafting expedition covering a 17-mile stretch of the Colorado River in the McInnis Canyons Recreation Area revealed an invasive takeover of cheatgrass across adjacent canyons, once filled with bunchgrass and sagebrush during a previous survey conducted in the 1970s for cattle grazing. This presentation explores the dynamic relationship of environment, cattle grazing, fire, and its impacts to cultural materials. The resulting disturbance to the sites, as well as the overall landscapes, challenges archaeologists to reevaluate their role in land management practices and for preserving the integrity of both cultural resources and native ecosystems.

Mitchell, Douglas [69] see Alford, McKenzie

Mitchell, Peter

[245]

Discussant

Mitchell, Robert and Guy Hepp (California State University, San Bernardino)

[160]

Refining the Chronology of Mortuary Deposits at La Consentida, Oaxaca, Mexico

In this paper, we present a refinement of the human burial sequence at the Early Formative period (2000–1000 BC) site of La Consentida, in Oaxaca, Mexico. Previously, the chronology of mortuary spaces at La Consentida has been supported by nine radiocarbon dates (2020–1510 cal BC) from secure contexts, including charcoal, carbonized material from pottery, and two human bone samples processed together using R_combine. Having only one direct date from human remains has necessitated the use of relative dating to place those mortuary deposits in the context of site occupation. The present study adds new dated bioapatite samples from nine sets of previously studied adult human remains found in the two mortuary contexts at La Consentida. Despite some challenges with dating bioapatite, securing new direct dates for these individuals enables our exploration of the mortuary spaces as they relate to the creation and maintenance of group identity and collective memory during the initial Early Formative period in Coastal Oaxaca. Finally, we compare the mortuary data from La Consentida to those from other sites in coastal Oaxaca, The Valley of Oaxaca, and Mesoamerica more broadly. Based on these comparisons, we discuss how La Consentida fits into local and regional mortuary traditions.

Mitchell, Simon [287] see Glaser, Vanessa

Mitchem, Alexandria (Columbia University)

[256]

People, Plants, and Pests: Desiccated Macrobotanicals at Bartram's Botanical Garden

In recent years, archaeobotanists have explored the potential of desiccated assemblages cached by rodents in historic standing structures. This paper analyzes one such dataset from Bartram's Garden, established in 1728 in Philadelphia. The Bartram family, along with at least one enslaved and one indentured worker, cultivated over 2,000 native North American and imported plant species over 122 years. Examining the material traces of plants at the garden as collected by rodents provides an opportunity for grappling with both the global scale of plant migration, and the hyper-local scale of plant, animal, and human interactions in the garden. Considering these scales together is critical for understanding botanical gardens as a both loci and agents of environmental change in the eighteenth and nineteenth century Middle Atlantic. Despite the fact that gardens are known to have been vectors for invasive species during European settlement of North America, archaeologists have yet to study how they were a part of the changing environment of the American colonies and Early Republic. Exploring these questions is a critical step toward examining the material conditions of botanical gardens and understanding the new relationships that were made possible between species in those spaces.

Mitchem, Alexandria [140] see Kassabaum, Megan

Mitrovic, Slobodan

[187]

Utility Lines Straddling State Boundaries: Cultural Resources Angle on Accumulated Knowledge and Knock-On Effects

In the regulatory side of archaeology we call cultural resource management, some of the utility line work

undertaken in the last several decades has created enormous repositories of information. The volume of excavated soil has been equally immense, in the process yielding critical data for present and future stakeholders. When utility work crosses state lines, it also meets particularities and legacy effects that are a function of individual states' processes of dealing with the accumulated data. This paper looks at several such projects and their ensuing maintenance, drawing attention to logistics and specific production of knowledge enabled by the scale of the undertakings.

Mixer, David (Binghamton University), Amy Thompson (University of Texas, Austin) and Terry Powis (Kennesaw State University)

[295]

From Buried Preclassic Villages to the Lexicon for Maya Architecture: The Impact of Architectural Studies in Belize on Maya Scholarship

In 1984, Stanley Loten and David Pendergast published *A Lexicon for Maya Architecture* based to a large degree on their observations during excavations at Lamanai and Altun Ha, both major Maya centers in Belize. At 16 brief pages of text and nine of figures, this much-coveted, difficult-to-find resource contains the essential vocabulary that scholars still use to describe Maya architecture. The lexicon provides a foundational platform on which architectural description and comparison across space and time can rest. While this work was critical to establishing a common language, it is perhaps the architectural heterogeneity of Belize across space and time that is most critical to our broader understanding of Maya society. While architectural studies in Belize have contributed to our understanding of Classic period (AD 250–800) trends in monumental architecture, the country has also been a key setting for research into domestic architecture, Preclassic (1100 BC–AD 250) architectural origins, and Terminal Classic (AD 800–1000) and Postclassic (AD 1000–1528) architectural transitions. In this paper, we review the major contributions Belizean archaeology has had on Maya archaeology scholarship while also pointing to some places where we believe architectural scholarship in Belize has been overlooked or misunderstood in the construction of broader narratives.

Miyano, Gentaro and Mario Rivera (ICOMOS, Chile ICAHM Unesco, RPA)

[242]

The Crop Fields of the Ramaditas: A Formative Site in the Atacama Desert

Ramaditas, a Formative village site dated to around 600 BC, is located in the driest section of the Atacama Desert. Surrounding the architectural structures is a large area of fields that were cultivated by the inhabitants of Ramaditas. Here we present aspects concerning the water system developed at Ramaditas based on an aerial study with drones and 3D digital reconstruction of the landscape, irrigation structures, and agricultural fields, which suggests the development of an efficient water system adapted to local environmental conditions.

Miyar, Kathryn [72] see Smith, Catherine

Mo, Linheng [315] see Lam, WengCheong

Moco, Ana Margarida [170] see Lewis, Brandon

Moe, Jeanne (Institute for Heritage Education)

[64]

Discussant

Moeller, Nadine**[155]***Hierakonpolis: A Case Study for an Early, Large Low-Occupation-Density Settlement from Egypt*

Much attention has been drawn to the discovery of unusually large agglomerations, so-called “anomalous giants,” that appeared out of nothing at different times and in many parts of the world, suddenly and without any signs for a noticeable long-term trend that would have logically culminated in their existence. This paper will discuss a pertinent case study from ancient Egypt, the site of Hierakonpolis, which is an emerging urban center dating back to the Predynastic period (ca. 3800–3600 BCE). The site can be characterized as a multicomponent site with clusters of larger cemetery areas, loosely organized settlement remains in the low desert including distinct production and manufacturing areas, a sacred precinct or forerunner of an early sanctuary. This unusually large early Predynastic town did not persist in the landscape for long and seems to have disappeared as fast as it emerged. Given its retraction to a more dense and nucleated form of settlement, it constitutes a social experiment that probably faced several unsurmountable challenges; environmental change might have been the decisive one. This paper will address aspects on monumentality, group identity and economic considerations with the aim to shed new light on the inhabitants and their social hierarchies at this LLODS.

Moen, Marianne (Museum of Cultural Heritage, University of Oslo)**[246]***The Impacts of Absence and Displacement on Viking Age Childhood*

Childhood as a part of social and cultural frameworks is varied and fluid, and the space afforded to and occupied by children will vary in multiple ways according to intersecting lines of social identity. The Viking Age is generally recognized as a period of profound social divisions, with social status as a paramount defining line. Gender, ability, kin group, and age also acted to delineate how social personas were created and contained. Here, I wish to discuss the impact of travel on Viking Age childhood. Firstly, the impact that absence in the immediate family may have had on children when parents or other figures of authority were absent on long-distance expeditions. Secondly, the impact that distance may have had on children themselves who took part in travel. And thirdly, the impact that displacement may have had on children who were brought into slavery. This three-level approach to one influencing factor gives room to examine the definition of childhood in the Viking Age according to social status, as well as how external factors integral to Viking Age cultural realities shaped the experience of childhood.

Mofidi, Ethan (University of Oklahoma)**[266]***From Calf Creek to Reed: Understanding the Lithic Assemblage of School Land I (34DL64) Delaware County, Oklahoma*

Beginning in 1939, the Works Progress Association (WPA) led by David Baerreis excavated the School Land I site as a mitigation effort before the completion of the Pensacola Dam which consequently submerged the site and adjacent areas. Since that point, the materials collected by the WPA have been largely untouched for further analysis, save for the faunal analysis done by Lathel Duffield in 1969. This lithic analysis seeks to contribute a piece of the puzzle in understanding School Land I and its consequent relationships. Situated on the foothills of the Ozarks, it is clear that this site was a place of significant meaning for people living in the Northern Caddo area and their ancestors. It is the goal of this analysis to gain insight into stone tool typologies, raw material selection, and the processes behind biface failures which will in turn provide insight into the role of the site, its households, and the people that lived there through time.

Mogauro, Megan (Hamilton College), Hannah Lau (Hamilton College), Daniel Cusimano (University of Hawaii, Manoa), Alexis Boutin (Sonoma State University) and Benjamin Porter (University of California, Berkeley)**[199]***Zooarchaeological Analysis of Sar El-Jisr Faunal Assemblage*

This project analyzes zooarchaeological remains from the late third to early second millennium mortuary complex at Sar El-Jisr, Bahrain. The assemblage is a legacy collection and its analysis will expand on previous research of the Dilmun burial complex, and furthers our understanding of Dilmun as a sociopolitical entity. These implications are relevant at both a local level and beyond, with consideration to Dilmun's established role as a center of international trade. The primary goal of this analysis is to understand the influence of past humans in the formation of this faunal assemblage, which we relate to the larger relationship between humans and animals at Sar El-Jisr. Finally, this research will also highlight the importance and challenges of reporting and historically situating legacy collections, a pressing problem in modern archaeology.

Mohammadi, Justin [14] see Woehlke, Stefan

Mohammadpour, Ahmad (Bentley University)

[209]

Archaeology and the Politics of Erasure in the Middle East

As a discipline initially tasked with understanding non-Western histories and heritage, archaeology has functioned mainly as a technology of forgetting rather than remembering when it came to indigenous material cultures. The role of archaeology in colonizing African and South American cultures is widely explored, but its colonial impact in the Middle East is highly neglected. In the post-Ottoman era, for instance, archaeology was deployed to forge a raciolinguistic national identity for emerging Turkish nationalism at the expense of erasing indigenous nations such as Armenians and Kurds, among others, within the official history of the dominant ethnic group. In Iran, Persian-centric archaeological studies, informed by Aryanism, have been deployed as a powerful instrument for a selective remembering of the past, aligning with the Persianist primordial nationalism. This research addresses this gap by comparing archaeology's role in state-building across the Middle East with other regions of the world. Furthermore, the current conflicts in the region cannot be fully grasped by merely examining the actions of state and non-state actors. Instead, we need to unravel how the past has been narrated and how it has informed the present.

Mohrs, Shelby (Northwestern University)

[190]

Archaeobotanical Evidence of Swahili Cuisine at Unguja Ukuu, Zanzibar

Food has an integral role in the formation of identity. Archaeobotanical techniques are an underutilized yet productive avenue through which we can understand African cuisines and identities, both past and present. This presentation will focus on the preliminary analysis of the archaeobotanical assemblage excavated from the site of Unguja Ukuu by the Urban Ecology and Transitions of the Zanzibar Archipelago project (UETZAP) in 2019. This research utilizes macro and microbotanical analyses to reconstruct Swahili cuisine(s) in the first millennium CE on the island of Unguja. Unguja Ukuu was one of the earliest and most influential cities on the medieval coast, presenting a compelling opportunity to discern what, why, and how everyday Swahili people were eating and how those habits may have changed. African cuisines have often been portrayed as simplistic or mere starvation foods, with popular conceptions conjuring the image of the "starving African." The goal of this presentation is not to erase the role of food insecurity in the suffering of African peoples. Rather, it will situate Swahili cuisine(s) and heritage within a deeper history, contribute to understanding the complexity of African cuisines and everyday life, and discuss the interplay between food and identity.

Molinares, Stephen (Chronicle Heritage)

[171]

Playing the Game: An Analysis of Hohokam Ballcourt Structures

Despite nearly a hundred years of research, Hohokam Ballcourt Structures remain a conundrum for archaeologists. What they were used for, who could access the courts (or the events that occurred in them), or even if the communities that built them utilized them for activities besides ballgames all remain ambiguous.

This poster elucidates a performance theory-based analysis of Hohokam Ballcourt Structures from across Arizona. This framework was chosen as it has been successfully utilized to analyze architectural structures and practices in both large- and small-scale societies around the world. My analysis consisted of identifying sites with ballcourts and compiling feature maps for 67 different ballcourt structures. The feature maps were then digitized and analyzed using GIS to calculate two estimations for the number of observers for each court, representing two potential crowd densities. The number of observers was then compared to site population estimates to try and answer three questions: (1) Is ballcourt size influenced by the population size of the communities that built them? (2) What percentage of the community within the Hohokam Ballcourt world had prime viewing of activities occurring within ballcourts? (3) Was access to these structures open to the public or restricted?

Moll, Rosa (University of the Witwatersrand) and Lyn Wadley
[225]

Assessing Production Components of the Pre-Still Bay Lithic Assemblage from Sibhudu Cave, South Africa

At Sibhudu Cave, the Still Bay technocomplex is found ~71,000 years ago and its formal tool component is dominated by bifacial points, while the deposit below, which Wadley (2012) called the pre-Still Bay, has a low density of bifacial points. The Pre-Still Bay has many flakes with few bifacial points, and it dates to between about 74,000 and 80,000 years ago. Some archaeologists have argued that because some bifacial points are present, albeit rare, the 80–74 ka assemblages also belong to the Still Bay industry. If the pre-74 ka ago layers do represent a longer Still Bay technocomplex than previously thought, it has been suggested that perhaps the bifacial points were removed from the site or will appear outside of the Wadley excavation trench in another part of the cave. This paper presents preliminary data from a study which aims to identify whether there was indeed substantial bifacial tool production at this time period, through a technological core reduction study of the cores and various lithic products. The results of such a study would provide further questions about the technological progression of the Middle Stone Age, especially for the continuing work at Sibhudu Cave.

Mollenhauer, Jillian (Metropolitan State University of Denver)
[309]

Chair

Mollenhauer, Jillian (Metropolitan State University of Denver)
[309]

Reconsidering Kingship among the Gulf Olmec

For decades debate among Formative scholars has raged over whether to classify Gulf Olmec societies as archaic states or chiefdoms; yet scholars on both sides have assumed that these societies were governed by elites under the jurisdiction of a single hereditary ruler. Stone monuments in the form of altar-thrones, stelae, and—most particularly—colossal heads are cited as evidence of dynastic kingship at the primary sites of San Lorenzo, La Venta, and Tres Zapotes. This model of single-ruler governance is often used to ideologically unite Olmec kings with their presumed counterparts in the later courts of the Classic Maya, while simultaneously disassociating the Olmec from Classic Gulf societies reliant on corporate models of power-sharing. However, such an interpretation overlooks key contextual information that undermines the theory of single-ruler governance. This paper will reexamine the contextual, stylistic, and iconographic evidence associated with monumental sculpture to suggest a possible model of dual rulership among the Gulf Olmec of the Early (1500–850 BCE) and Middle (850–350 BCE) Formative periods. In doing so, I propose to align the discourse of Olmec governance with later examples of Indigenous political organization found both in and out of Mesoamerica's Gulf Coast.

Monaghan, John [302] see Monaghan, Lee Ann

Monaghan, Lee Ann, John Pohl (California State University, Los Angeles), Manuel Hermann (CIESAS) and John Monaghan (University of Illinois, Chicago)**[302]***Reconstructing the Codex Colombino-Becker*

Precolumbian manuscripts provide a view of indigenous life that is largely unmediated by Spanish colonialism. The Colombino-Becker is one of the masterpieces of the Mixtec Codices, but poor preservation, missing pages, and an effort to make the manuscript more palatable in a Christian context by erasing not only precolumbian rituals but also names and headdresses have limited the ease of understanding of what is written. A team, including John Pohl, has been working on the reconstruction of the manuscript. In this paper we will present two of the reconstructed pages and discuss the methods used to make the manuscript more accessible.

Monetti, Lisa**[123]***Arch Street Project: Sustainable Collaboration and Learning after Reburial Using Digitized Remains*

The highly collaborative nature of the Arch Street Project allowed for hands-on learning opportunities for university students. This was an especially valuable experience at universities that traditionally rely on replica human remains for teaching as it increased student access to taphonomic conditions, human variation, and discussions on ethics and reburial. The Arch Street Project also created an opportunity to reconsider the ways human remains can continue to be made accessible for teaching and learning after reburial. This presentation will share the methodology used to digitize the remains of several individuals from the Arch Street Project collection using a combination of 3D infrared light scanning and photogrammetry. The result is an immersive virtual laboratory in which students can practice osteological analysis. Pedagogically, this tool can be used for teaching and assessment and can be adjusted to different experience levels. This also creates an opportunity for collaborative learning across universities with different access to human remains in their teaching collections. It is incredibly important to consider and teach the ethical ramifications of digitizing human remains and to think carefully about ownership of data. For this reason, these scans have not been made publicly available and this presentation will also cover ethical recommendations.

Monge, Susan (University of Illinois, Chicago)**[118]***Poultry in Motion: The Translocation of Turkeys (*Meleagris* spp.) in Ancient Greater Nicoya, Costa Rica*

The trade and movement of animals and animal-derived artifacts was widespread and varied significantly throughout the ancient Americas, often requiring substantial efforts comparable to that employed in acquiring other material resources or prestige items. Originally native to parts of modern-day Mexico and the United States, turkeys (*Meleagris* spp.) represent an example of animals that were intentionally translocated or moved outside of their native environments in precolonial times. Preliminary data from the Greater Nicoya area of northwestern Costa Rica, the southernmost region where turkeys appear to have been translocated, suggests that these non-native birds may have been a restricted resource that served as indicators of social organization. Furthermore, turkeys may have been acquired through local participation in an elite-based regional interaction sphere. Their association with elite goods is also indicated by their representation in high quality ceramics accompanied by scenes and symbols of power and prestige. Using ancient DNA, stable isotope, and osteological data, my research aims to understand and address social aspects of turkey translocation and management practices within ancient Greater Nicoya societies during a period of important sociopolitical changes, increasing social inequality, and the arrival of foreign groups into the area.

Monge, Susan (University of Illinois, Chicago)**[234]***Discussant*

Monroe, J. Cameron (University of California, Santa Cruz)**[250]***The Three Phases of Sans-Souci: An Architecture of Remembering and Forgetting in the Kingdom of Hayti*

Following three centuries of colonial rule, the Haitian Revolution ushered a period of political change, one in which ex-slaves, maroons, and free *hommes de couleur* united to forge new political institutions on the island of Saint Domingue. Henry Christophe was declared King Henry I of the Kingdom of Hayti in 1811.

Christophe was an avid builder, constructing royal palaces and fortresses and reclaiming plantations as rural seats of power. The largest palace was Sans-Souci in Milot, a 13 ha neoclassical complex remembered as one of the most magnificent edifices of the West Indies. Michel Rolphe Trouillot famously argued that the construction of Sans-Souci was a political act designed to silence the memory of a rival general of the same name. Recent excavations by the Milot Archaeological Project, however, have revealed the presence of at least three major construction phases, and documented clear continuities in the architectural plan extending back to the colonial period. I argue that these three phases of building, or architectonic mentions and silences, were intended both to “remember” and “forget” various classical, West African, and colonial pasts, providing a new perspective on how monumental architecture was used to shape public consciousness in the nascent Kingdom of Hayti.

Monroe, Shayla (Harvard University)**[85]***Chair***Monroe, Shayla (Harvard University) and Melina Seabrook (Harvard University)****[85]***Cattle Production and Strategic Meat Distribution in Egypt and Nubia*

Richard Reddings’s (1992) model developed at the site of Kom el-Hisn offered a means of understanding strategies by which ancient societies could strategically raise animals for the purpose of provisioning communities in multiple locations. This model proved useful for understanding meat provisioning strategies at the Egyptian fortress of Askut in Nubia (ca. 1850–1550 BC), in which local herders may have raised cattle for provisioning fortress residents while themselves consuming caprines.

Monteiro da Silva, Sergio [3] see Menéndez, Lumila

Montenegro, Alvaro**[191]***Chair***Montenegro, Alvaro****[191]***Incorporating Knowledge about Future Weather Conditions on Navigational Decisions in an Agent-Based Seafaring Simulation: Comparison to Simpler Navigation Strategies*

The efficiency and safety of ocean travel is greatly dependent on along-trip environmental conditions. Agent-based simulations that optimize routes based on expected environmental conditions have been used by the shipping industry and the sailboat racing community for decades. Some recent efforts in archaeology have used the latter models. Here I describe what I believe is first agent-based seafaring model capable of route optimization designed specifically for archaeology, and with the distinguishing feature of defining how far into the future conditions are known by the vessel’s occupants. Simulations of the same trips with optimizing and non-optimizing versions of the model are conducted to provide insight into how and by how much knowledge about future weather influences trips performed under distinct settings (length of trip, oceanographic conditions, season, etc.). Under the widely accepted understanding that ancient seafarers possessed considerable knowledge about the ocean environment, including the ability to forecast future

conditions, I argue that the new version of the model allows for the adoption of more realistic navigational strategies in seafaring simulations. The experiments comparing optimized to non-optimized simulated trips will show under which settings knowledge of future conditions have the most and least impact on trip outcome.

Montero, Claudia [117] see Correa Gurrulat, Itaci

Montero, Gabriela (University of Kentucky)

[163]

Arqueología de transiciones: Enfoques teórico metodológicos para investigar el cambio desde la perspectiva de la cerámica Formativa y Clásica de Mazapa, La Sierra y El Escobillal, Veracruz

A lo largo de los años, la práctica arqueológica se ha dedicado a estudiar el cambio desde diversos enfoques, incluyendo procesos adaptativos, resiliencia, entre otros temas que guían nuestras investigaciones para comprender cómo vivieron las sociedades durante periodos transitorios. En esta ponencia, se realiza una reflexión sobre estos diversos enfoques y sobre la importancia del estudio de la continuidad para visualizar de una mejor manera qué fenómenos son realmente cambios y qué otros son más bien categorías de investigación arqueológica. La manera en la que navegamos entre estas dos realidades impacta de gran manera nuestro trabajo, por lo que es importante reconocer este tema como un reto para la práctica. Aquí, se toma como ejemplo el trabajo realizado con la cerámica del proyecto PAMLAS, en los sitios de Mazapa, El Escobillal y La Sierra, Veracruz. Se argumenta que, sobre todo en el sur de Veracruz, los estilos diagnósticos que indican el cambio se encuentran comúnmente dentro de un mayor contexto de continuidad, por lo menos en la práctica alfarera. Se exploran los posibles significados de este argumento, desde la transición entre el Formativo y el Clásico en dichos sitios.

Montero, Laurene (Pueblo Grande Museum [S'edav Va'aki], City of Phoenix), Nicole Armstrong-Best (S'edav Va'aki Museum) and Lindsey Vogel-Teeter (S'edav Va'aki Museum)

[88]

Co-stewardship: Positive Impacts from Meaningful Consultation

S'edav Va'aki (formerly known as Pueblo Grande) is an ancestral O'odham (Hohokam) archaeological village site and the only National Historic Landmark in Phoenix, Arizona. For more than a decade, the S'edav Va'aki Museum (Museum) has consulted monthly with the Salt River Pima-Maricopa Indian Community (SRP-MIC) and Gila River Indian Community (GRIC) Tribal Historic Preservation Offices (THPOs). What began as a compliance-focused dialogue between the Phoenix City Archaeologist and SRP-MIC Cultural Resource Compliance Supervisor on citywide archaeology expanded to include Native American Graves Protection and Repatriation Act (NAGPRA) consultations with both GRIC and SRP-MIC THPOs. Ultimately, these compliance consultations expanded to meaningful collaborations on exhibits, signage, and collections management policies. Among the many positive impacts from this co-stewardship arrangement is renaming of the Museum from a Spanish name assigned in the 1920s—Pueblo Grande—to the O'odham name, S'edav Va'aki (meaning Central Platform Mound), which better describes the ancient village and represents the cultural continuity between its original inhabitants and the O'odham people. By collaborating with our tribal partners, the Museum has enhanced our interpretive programming to the public and has elevated the quality and cultural appropriateness of our collections care and archaeological compliance.

Montero, Laurene (Pueblo Grande Museum [S'edav Va'aki], City of Phoenix)

[102]

Chair

Montero, Laurene [102] see Vogel-Teeter, Lindsey

Montes, Khristin (Regis University & InHerit/Indigenous Heritage Passed to Present) and Miguel Covarrubias Reyna (Independent Researcher & INAH)

[32]

Miniature as Symbolic Form: Late Postclassic Ritual Architecture on the Edge of the Maya World

[WITHDRAWN]

Montgomery, Janet [22] see DeWitte, Sharon

Montgomery, Lindsay (University of Toronto)

[84]

Practicing Indigenous Data Sovereignty On and Off Picuris Pueblo Lands

Over the past decade, a growing number of archaeological projects in North America have incorporated community-based participatory research (CBPR) methods. For Indigenous communities, this collaborative paradigm marks an extension of a more global body of anti-colonial activism and policymaking oriented around Indigenous sovereignty. In recognizing the inherent right of Native Nations to self-determination and governance, the framework of Indigenous data sovereignty offers a more radical reenvisioning of existing power dynamics around data collection, curation, and dissemination. In this talk, I situate the Picuris Pueblo Archaeological Research Project within a data sovereignty paradigm, drawing particular attention to the ways that our collaboration has shifted the locus of jurisdictional authority over archaeological data toward the Picuris Governor and Tribal Council. Throughout this discussion, I will highlight two major challenges in the application of the ethical principles of data sovereignty: differences in how sovereignty is enacted on and off-reservation lands and tensions around how to define benefits for a diverse group of community members and project participants.

Montgomery, Lindsay (University of Toronto)

[196]

Moderator

Montgomery, Lindsay [84] see Fowles, Severin

Montgomery, Shane (University of Calgary)

[74]

Discussant

[31]

Chair

Montgomery, Shane (University of Calgary), Armando Anaya Hernández (Universidad Autónoma de Campeche), Nicholas Dunning (University of Cincinnati) and Kathryn Reese-Taylor (University of Calgary)

[31]

Contextualizing the Ancient Cultivated Landscape of the Bajo el Laberinto Region, Campeche, Mexico

Ongoing archaeological investigations in the Bajo el Laberinto region, bolstered by advances in aerial laser scanning technology, have begun to offer a clearer indication of how the ancient Maya manipulated their environment to manage food, water, and soil insecurities. Multiple lidar campaigns have resulted in the acquisition of approximately 200 km² of high-resolution surface models of the area, revealing an intricate network of terracing, berms, and cultivated wetland modifications surrounding the extensive bajo. Densely populated during the Preclassic and Classic periods, the region provides a valuable setting for exploring the relationship between urban growth, long-term capital investment, and agricultural strategies in this portion of Mesoamerica. This presentation synthesizes remote sensing methods and data derived from archaeological excavations to examine the density, diversity, and complexity of terraforming features across the Bajo el

Laberinto landscape, including those associated with the major centers of Calakmul and Yaxnohcah. This research seeks to elucidate the sophistication of precolumbian food production in the Maya Lowlands, with a focus on agrarian engineering projects and land reclamation.

Montgomery, Shane [31] see Brewer, Jeffrey
 Montgomery, Shane [31] see Carr, Christopher

Montón-Subías, Sandra (ICREA/Pompeu Fabra University) and Boyd Dixon (Stantec GS and SEARCH)

[18]

Interaction and Isolation in Manislan Mariñas: 1500 BC–AD 1769

This paper addresses long-term processes of inter- and intra-island interaction and isolation in the Manislan Mariñas (Mariana Islands), spanning their first occupation (ca. 1500 BC) to the end of the Jesuit colonial mission (AD 1769). I focus on mobility, ocean communication and networking, engagement with the sea, and social intersectionality. CHamoru DNA today can unite within a single person multiple ancestors from Europe, Asia, America, Africa, and Oceania. No doubt, this fact speaks of a long history of cultural interactions but may however reflect different realities when grounded to specific CHamoru communities. To understand these particularities, we need to intersect social position, gender, age, and ethnicity to better understand the role that ocean engagement, communication and networking had on the people of the Mariñas. This intersectional focus also enables us to examine how interaction and isolation may not be dichotomous but coexist together. This is clearly exemplified by modern Spanish colonialism that “connected” the Mariñas to the emergent global world while fomenting interisland disconnection and miscommunication.

Montt, Indira [156] see Valenzuela, Daniela

Monzon, Elvis [81] see Mullins, Patrick

Moody, Jacob (Midwest Archeological Center, National Park Service) and Adam Wiewel (Midwest Archeological Center)

[177]

Geophysical Survey at the Janis-Ziegler / Green Tree Tavern Site (23SG272), Ste. Geneviève National Historical Park, Missouri

The Midwest Archeological Center carried out multi-instrument geophysical surveys at four properties managed by Ste. Geneviève National Historical Park in 2022 to better understand archaeological resources within them. Ste. Geneviève is a French colonial town in southeast Missouri with vernacular architecture dating to the eighteenth century. Among these historic properties is the Janis-Ziegler / Green Tree Tavern site, which was constructed in 1790. The residence and business are associated with Nicolas Janis, a wealthy French Canadian, who moved with his family and at least 15 enslaved people to Ste. Geneviève from nearby Kaskaskia, Illinois, a year prior. Excavations conducted by Illinois State University from 2006 to 2009 revealed part of an outbuilding constructed in the poteaux-en-terre style. Based on recovered artifacts, it is thought to represent both a detached kitchen and quarters of enslaved people. Magnetometry, ground-penetrating radar, earth resistance, conductivity, and magnetic susceptibility survey results suggest that at least two outbuildings are present in the vicinity of the residence, including the structure tested previously, a pathway leading from the residence to this outbuilding, and a well located just to the side of the residence’s rear entrance. Limited test excavations are planned in 2024 to evaluate these finds.

Mooney, Dawn Elise (Museum of Archaeology, University of Stavanger)**[119]***From Staple to Shameful (and Back Again?): The Changing Fortunes of Seaweeds in the North Atlantic*

Seaweeds are in vogue: new initiatives tout seaweed farming as a solution to global problems of food insecurity that can simultaneously combat climate change through carbon sequestration and regenerate damaged marine environments. However, seaweed consumption is often presented as challenging for Western palates, requiring a significant cultural shift in order to become widely accepted. This presentation argues that seaweed exploitation was in fact widespread in the North Atlantic region until the twentieth century, and that the lack of seaweed consumption in the present day is less influenced by tradition than by industrialization, capitalism, and ideas of “modernity.” Archaeological finds of charred seaweed fragments will be interpreted in the light of ethnohistorical evidence to explore the importance of seaweeds in agriculture, diet, craft, and industry in the past, with particular reference to finds from Iceland and Norway. It is proposed that better understanding of past human relationships with seaweeds can make their use and consumption more appealing to modern consumers. However, this presentation also acknowledges the limitations of current archaeological practice and the consequent focus on finds of charred seaweed fragments and examines how we might gain a fuller understanding of past seaweed exploitation practices in regions with poor organic preservation.

Moore, Christopher (University of Indianapolis)**[331]***Places that Percolate: French Post Park and the Creation of a Hoosier Origin Story*

On the surface, French Post Park, a small, wooded picnic area and campground located on the south bank of the Wabash River in Carroll County, Indiana, may seem unremarkable. Covering about 5.4 acres, the park’s amenities consist of a small shelter, a few fire rings, a boat ramp, and a swing set. But, to the people of Carroll County, particularly those who live nearby in Adams and Rock Creek Townships, the park is a persistent place that cultivates their deep-seated feelings of patriotism, pride, and place. While we often associate persistent places with concentrations of resources, ancient traditions, or remarkable landforms, French Post Park reminds us that “place” is a quality, not a quantity, and that persistent places become such not because of the resources they provide but because of the relationships they foster and the feelings of belonging and connection they evoke.

Moore, David [253] see Beck, Robin

Moore, Elizabeth**[70]***Linear Enamel Hypoplasia: An Analysis of Health Disparities between the Early Intermediate Period and Middle Horizon of Nasca, Peru*

There has been an abundance of research on the Nasca culture and linear enamel hypoplasia (LEH) separately. However, there is no literature specifically on Nasca and LEH analysis comparing the Early Intermediate period (EIP) and the Middle Horizon period (MH). The research detailed here shows there are evident disparities in LEH between Nasca individuals correlating to status, cranial vault modification (CVM), and trophy heads, between the EIP and MH. On the other hand, fluctuations in LEH severity are similar between sexes due to shared experiences of stress linked to changes in environmental conditions and in sociopolitical organization. I utilized macroscopic observations of LEH on 47 Nasca individuals from the Kroeber collection from the Field Museum in Chicago, Illinois. Through this project, I found statistical significance between sex and trophy heads, cranial modification and LEH presence, and LEH between Early and Late Nasca periods. I conclude that while not significant, but approaching significance, females tend to be more negatively impacted than males from similar stressors. Overall, health status deteriorated over time showing environmental changes and sociopolitical changes leading up to and during Wari imperial occupation had a negative effect on Nasca individuals, despite/regardless of status or sex.

Moore, Elizabeth A. (Virginia Department of Historic Resources)**[104]***“What Is Past Is Prologue”*: Climate Change, Predictive Models, Data Challenges, and Protecting Virginia’s Archaeological Resources

Like many other areas, Virginia is becoming increasingly impacted by the effects of climate change. Over the past several years, the Virginia Department of Historic Resources has taken efforts to model these impacts to identify vulnerable areas for cultural resources planning and mitigation purposes. Testing these models requires knowledge on the distribution, density, size, and integrity of sites across the landscape.

Archaeological survey varies significantly across the state and is primarily focused on the areas being impacted most by development pressures. VCRIS, the Virginia Cultural Resources Information System, contains locational and contextual information on over 50,000 archaeological sites. While many of these sites have been surveyed and have reliable integrity and boundary data, there is a significant number of older site records that include unconfirmed boundary estimates from surface observations or were map-projected with no ground-truthing. Our knowledge of the extent and conditions of submerged sites is even more limited. To begin to correct these issues, terrestrial and water-based survey is being conducted in a variety of physiographic settings across the Commonwealth. This baseline data will be used to assess and project site conditions and loss into the future and test various climate change impact models.

Moore, Elizabeth A. (Virginia Department of Historic Resources)**[274]***Discussant***Moore, Erik (University of New Brunswick) and Mike Meade (University of New Brunswick)****[197]***Embedding Librarians in Archaeological Field Schools*

For the past two summers, the Anthropology Librarian and the Digital Imaging Coordinator from the University of New Brunswick Libraries have embedded as experts and co-researchers in field schools led by archaeologists in the Department of Anthropology at UNB. The goals of this project are for those library specialists: (1) to gain deeper understanding of the complex data management and research needs of archaeologists, and especially of data and information praxis in the field, (2) to help students better understand the relationship between fieldwork, data, and dissemination within the broader research life cycle, and (3) to conceptualize and begin developing added areas of support from the Libraries in the form of research data management, dissemination of field-school work to disparate audiences, and expanded 2D and 3D imaging capabilities in the field and in the lab. Initial efforts have been very positive in both directions, and the project is moving from a pilot into a more formalized part of the field-school curriculum. Project archaeologists and librarians alike feel that this model is worth sharing, for others to explore in similar field-school contexts, where resources allow.

Moore, Jerry (CSU Dominguez Hills) and Carolina Maria Vilchez (Instituto Nacional de Cultura)**[161]***Una Frontera Permeable: Multiple Modes of Exchange in Prehispanic Tumbes, Peru*

Although the Tumbes region has been a frontier based on environmental differences, ethnolinguistic boundaries, and political divisions both in prehispanic and modern times, this frontier zone was neither rigid nor impermeable. Archaeological data dating from ca. 4700 BCE until ca. AD 1500 from Tumbes indicates exchange networks existing at multiple scales—regional, interregional, and long distance—and engaged various diverse settlements, and not solely principal centers. We propose that this long-standing, diverse, and non-centralized exchange was conducted by *vendedores ambulantes*, or peddlers, that complemented centralized market exchanges or political institutions. This decentralized economic exchange continues in the rural regions of Tumbes, where products such as fresh fish, furniture, and even gasoline are distributed through non-centralized networks. These less formal exchanges coexisted with state-organized production

and exchange such as the manufacture and exchange of *Spondylus* objects produced at the Taller de Conchales at the Inca provincial center of Cabeza de Vaca, networks of exchange and interaction that permeated the Tumbes frontier.

Moore, Jerry (CSU Dominguez Hills)

[208]

Discussant

Moore, Katherine (University of Pennsylvania)

[85]

The Biological Baseline in Zooarchaeology: Unpacking the Domestication of South American Camelids

The domestication of llamas and alpacas in South America resulted in compelling similarities to sheep and goat pastoralism in Western Asia, but the underlying biology of the wild ancestors of camelids provided distinct challenges to human control and selection. The pastoral economies of South America are strongly affected by these factors even today; these factors also weaken attempts to use sheep or goats as a model for llama and alpaca domestication. The South American camelids have distinctive digestive systems; specialized adaptations to deal with aridity, hypoxia, and cold; and as induced ovulators camelids provide unique challenges to humans attempts to control reproduction. The archaeology of the ancestral guanaco and vicuna is compared with the assemblages that suggest early llamas and alpacas, tracing the morphological, demographic, and genetic evidence for a camelid-specific process of domestication. This paper gratefully acknowledges Richard Redding's fine-grained treatment of sheep and goat pastoralism that inspired a generation of scholarship.

Moore, Tamara and Jim Aimers (SUNY Geneseo)

[21]

The Sloppy Science of Ancient Maya E-Groups

Ancient Maya E-Groups have been a subject of archaeological fascination for nearly a century, resulting in extensive literature on E-Groups. However, consistency in that literature is hard to find. In this paper, we review some problems with E-Group research. This includes the lack of a consistent definition of the characteristics of E-Groups, the limited number of excavations that have taken place at E-Groups, and the lack of consensus on the functions and roles these assemblages played among the Maya. By highlighting these issues, we aim to show that our current understanding of E-Groups is mainly speculative, filled with academic baggage, and broad-stroke assumptions used on a range of architectural assemblages. Such assumptions are often treated as fact by virtue of repetition within the literature. We will end our paper with proposals on how to improve future academic discussions of E-Groups.

Moore, Tom (Durham University, UK)

[155]

Negotiating Power? Explaining Dispersed Low-Density Mega-sites in Late Iron Age Europe

The mega-sites that emerged in the European Late Iron Age (ca. third century BCE–first century CE), often referred to as *oppida*, have struggled to be understood in the context of traditional concepts of urbanism. Comparative approaches to urbanism have, however, increasingly allowed them to be considered as part of a diverse range of alternatives to nucleated towns, as mega-sites, polyfocal complexes, or powerscapes. In this paper, I argue that European Late Iron Age mega-sites developed forms of dispersed, low-density occupation not simply due to reasons of sustainability but largely because of the social context in which they emerged. Through assessment of how these complexes operated as power centers, and through comparison with mega-sites around the world, the paper will explore how the development of Late Iron Age mega-sites charts these societies' negotiation of a transition from rural communities to larger social systems. These low-density centers reflect the varying ways in which these societies retained heterarchical social forms as power became increasingly centralized.

Moot, Dana (University of Alabama) and Alexandre Tokovinine (University of Alabama)
[90]

Cups for the King: Ajnumsaaj Chan K'inich of Naranjo and the Emergence of Regional Styles of Classic Maya Elite Serving Vessels

Distinct regional styles are a hallmark of Lowland Maya elite polychrome ceramic vessels during the Late Classic period (550–820 CE). However, our understanding of the phenomenon has not advanced beyond its mechanics—the presence of attached craft workshops at the courts of ancient Maya rulers. This paper attempts to fill the gap by considering one of the earliest styles associated with the royal court of Ajnumsaaj Chan K'inich of Naranjo. The presentation combines the analysis of the more technical properties of the style (vessel forms and decoration modes) with a survey of themes, texts, and paleography. It takes advantage of recent excavations at Naranjo and sites in its vicinity including Holmul that provided the first corpus of provenanced whole and partial vessels attributed to Ajnumsaaj Chan K'inich's artists. Finally, the paper considers the historical circumstances of the emergence of the Naranjo style of polychrome vessels. These multiple lines of inquiry offer insights into the reasons behind the rise of regional styles of Classic Maya elite pottery.

Moot, Dana [159] see Tokovinine, Alexandre

Mora, Fabrizio [243] see Sanchez Garcia, Julio

Mora, Rafael [126] see Sánchez-Martínez, Javier

Moraes, Bruno (Museu Paraense Emilio Goeldi (col.) Earth Analytic Inc.), Wetherbee Dorshow (University of New Mexico), Helena Lima (Museu Paraense Emilio Goeldi), Kalutata Kuikuro (AIKAX) and Michael Heckenberger (University of Florida)
[61]

Participatory Mapping and Self-Management of Territory among the Kuikuro of the Upper Xingu, Amazonia

The use of cartography for land management is not new. However, the use of geotechnologies as instruments for strengthening indigenous communities, including the self-management of their territories, constitutes a new and wide-ranging possibility for the application of these tools. Participatory community mapping and territorial self-management are important resources for resistance against the threats posed to Brazil's indigenous and traditional peoples today, such as illegal invasions for logging and mining. Here, I present the experience with the Kuikuro peoples of the Upper Xingu (Southern Amazon) of using geographic information systems and new platforms based on cloud data. Now, lidar technology is also one of the key instruments that enlighten the past and strengthen the future of the Kuikuro people.

Moraes, Bruno [54] see Pinto Lima, Helena

Moragas, Natalia (University of Barcelona)
[152]

Reassessing a Postclassic Subterranean Ceremonial Complex at Teotihuacan

Life in the ancient city of Teotihuacan did not end with the collapse of Classic period society, but rather, until the constitution of the current zone of archaeological monuments, the area was a place of residence, rituals, and somewhat later, pastures and crops. We must remember that the period from AD 600 until 1521 occupies a broader chronological arc than the Classic period itself. However, although with some notable exceptions, it has received less interest. This contribution aims to update some of the ideas and interpretations derived from the partial excavation of one of the artificial cavities that were reused in the early Postclassic as a burial place.

Moragas, Natalia [198] see Torras Freixa, Maria

Morales, Daniel [161] see Seki, Yuji

Morales, Ernesto (California State University, Los Angeles)
[221]

Injecting Rationality into a Reevaluation of Chalchihuites Mining

As early as 1910, Manuel Gamio called attention to what he termed *cavernas* in the Chalchihuites area of Zacatecas. Later, in the 1960s, Charles Kelly and Philip Weigand labeled these features mines and proposed that they supplied Teotihuacan with turquoise. It has since been shown that the area is not a turquoise producing area. Nevertheless, the idea of the Chalchihuites as a mining area remains firmly entrenched even as proponents scramble to determine what may have been extracted. Logically, the mineral would have to be one that runs in veins in order to justify tunnel mining as opposed to pit or open-face mining. At no point has it been established what is being mined nor if the material runs in veins which would be consistent with tunnel mining. Even the most cursory examination of the proposed features suggests that the identification as mines is preposterous. Entrances are often tiny forcing entry and exit via crawling passage between chambers is similarly arduous. This paper proposes an alternative function for these supposed mines.

Morales, Juan [162] see Lombao, Diego

Morales Forte, Rubén [98] see Lamoureux-St-Hilaire, Maxime

Morales Guillen, Arlina [163] see Ortiz Brito, Alberto

Morales Sanchez, Angel [321] see Gonzalez Esteban, Cristina

Moran, Kimberlee (Rutgers University, Camden)
[300]

Discussant

[123]

Chair

Moran, Kimberlee (Rutgers University, Camden)
[123]

The Evolution of the Arch Street Project

In late 2016, the *Philadelphia Inquirer* reported that human remains were uncovered at a local construction site, 218 Arch Street, formerly the First Baptist Church of Philadelphia (FBCP) cemetery. Over the course of 2017 three phases of excavation ranging from extreme salvage to controlled CRM excavation took place resulting in the recovery of nearly 500 individuals. This presentation recounts the efforts of a multidisciplinary, multi-institutional collaborative of researchers, students, and professionals assembled to assist in the study and stewardship of the remains. Known as the Arch Street Project, this approach has led to new methods and scientific applications toward understanding the site of the cemetery and the lifeways of the individuals interred therein. Central to the story of the Arch Street Project are many legal and ethical challenges that continue to be navigated. The presentation explores what the Arch Street Project has accomplished since 2017 and the work to be done once all remains and associated artifacts are reburied.

Moran, Kimberlee [123] see DiEmma, Gabrielle
 Moran, Kimberlee [123] see Miller, Kyra
 Moran, Kimberlee [123] see Morton-Hayward, Alexandra

Morano, Susana [158] see Garcia-Piquer, Albert

Morcote Rios, Gaspar [36] see Osborn, Jo
 Morcote Rios, Gaspar [217] see Garay-Vazquez, J. Julian

Moreau, Alyssa [268] see Howey, Meghan

Morehart, Christopher (Arizona State University)
[128]

Managing Teotlalpan: Resourcefulness and Socioecological Diversity during the Epiclassic Period in Central Mexico
 Studies on traditional ecological knowledge stress the importance of local resource management and autonomous governance. Resourcefulness constitutes an integral aspect of such bottom-up pathways. Dependent on knowledge, skills, and social capabilities, resourcefulness allows multiple organisms, materials, techniques, and places to be assembled into diverse ecological strategies and spaces. Resourcefulness is adaptive but also can buffer communities from a range of problems—environmental, social, and political. Recent investigations at the Epiclassic community of Los Mogotes, located between the northern Basin of Mexico and the Mezquital Valley, demonstrates a connection between ecological diversity and sociopolitical autonomy. Established on a defensible hilltop during a time of change, instability, and conflict, residents responded resourcefully to the environmental challenges of their local environment. They mobilized household and communal institutions to create a landscape of gardens, terraces, walls, canals, and reservoirs. They cultivated and collected a diverse assemblage of plants with unique and overlapping ecological requirements. Not only *Zea mays* but species of *Chenopodium*, *Amaranthus*, *Salvia*, *Phaseolus*, *Portulaca*, and other taxa were just as important, if not more so. This research suggests political autonomy, community persistence, and ecological resilience mutually depended on the resourceful management of a diverse suite of species, practices, and physical spaces.

Morehart, Christopher [174] see Blumenfeld, Dean
 Morehart, Christopher [281] see Villasenor Iribe, Eunice

Morell-Hart, Shanti (Brown University)
[128]

Culinary Arts and Plant Residues of the Ancient Maya Lowlands: Botanical Ingredients beyond Maize and Cacao
 Foraging, home gardening, and large-scale cultivation yielded products consumed at every level of ancient Maya societies, albeit in varying proportions. For decades, researchers have carefully documented miniscule botanical residues, from chemical signatures to visible seeds, through a number of analyses. Some plants have proven more visible than others, and/or of more interest than others; specialized foodstuffs like cacao and annual crops like maize, beans, and squash have received the lion's share of attention. In this paper, I discuss how these better-known food plants were complemented by geophyte crops like manioc and sweet potato, home-garden resources like achiote and nance, and foraged foods like hoja santa and hackberry. Ancient Maya people across the Lowlands used these plants to great culinary effect, and sometimes in artistic representation and sacred ceremony. We find a wealth of plants with diverse flavors and aromas, contributing to the sacred and the singular as much as the quotidian and the mundane.

Morell-Hart, Shanti (Brown University)

[179]

Chair

Morell-Hart, Shanti [256] see Herrera-Parra, Esteban

Morello Repetto, Flavia (Instituto de la Patagonia, Universidad de Magallanes), Manuel San Roman (Instituto de la Patagonia, Universidad de Magallanes), Fabiana Martin (Instituto de la Patagonia, Universidad de Magallanes), Luis Borrero (Universidad de Buenos Aires & CONICET, Argentina) and Marta Alfonso-Durruty (Kansas State University, USA)

[9]

Techno-economic Approach to Early Lithic Industries of Fuego-Patagonia, Discussing Interactions among Culture, Society, and the Environment (50°–56° South Latitude)

In this paper, we discuss studies of the early lithic materials from Fell Cave and Cueva del Medio (ca. 13,000 cal BP) in comparison with Holocene industries from Punta Santa Ana I, Marazzi I, Cabo Monmouth 20, Pizzulic 2. Three main axes are assessed: first, transport and interactions related to nonlocal raw materials; second, elaborated core reduction methods and debitage with predetermination (for example Levallois, bifacial shaping, blade and blade tendency reductions) as the action modes that can be related to complex processes of knowledge sharing and transmission; and, third, functional analysis related to *chaîne opératoire* and toolkit behavior managements. Still, a large range of techno-economic strategies are observed and better understood within multiple scales and degrees of interaction among human groups and paleoenvironments. The results have a direct rapport with the key role of early marine nomads since ca. 7000 cal BP and dynamics related to biogeographic barrier notions related to the Strait of Magellan. This presentation is funded by grants: ANID/BASAL FB210018, FONDECYT 1211976, 1231691 & 1220219.

Morello Repetto, Flavia [174] see San Roman, Manuel

Morello Repetto, Flavia [158] see Torres, Jimena

Moreno, Federica [191] see López Mazz, José

Moreno, Meredith [269] see Chovanec, Zuzana

Moreno-Meynard, Paulo (CIEP), Diego Galleani (CIEP), César Méndez (CIEP), Omar Reyes (UMAG-CIEP) and Amalia Nuevo Delaunay (CIEP)

[77]

Spatial Distribution and Archaeological Characteristics of the Historical Record of Central-West Patagonia

The archaeological investigation of historical and recent periods in the Central West Patagonian region has garnered less attention than earlier records. Nonetheless, a diverse array of material evidence, primarily comprising rural architectural features, delineates a collection of sites and attributes that signify the relatively belated incorporation of this territory into Chilean colonization during the nineteenth–twentieth century. Leveraging prior research endeavors, we present a novel geographic information system (GIS)-based study encompassing a substantial portion of the region, incorporating records within continental basins as well across isolated inhabited islands of the western archipelago. This GIS-based approach facilitates the elucidation of spatial autocorrelation within historical records while examining their interrelation with pertinent variables like contemporary land utilization, topographical influences, and potential for mobility within this pristine territory. To ensure accessibility in presenting this amalgamation of temporal and spatial data, a user-friendly geo-portal has been developed and integrated into a dedicated website. Finally, this paper critically examines the historical and recent archaeological record through the lenses of functional, spatial, and temporal variability, underscoring the multifaceted utilization of space within Central West Patagonia.

Morgan, Brooke (Illinois State Museum), Logan Pappenfort (Dickson Mounds Museum) and Margaret Alway (Dickson Mounds Museum)

[72]

From Controversy to Collaboration: NAGPRA Practice and Repatriation at Dickson Mounds Museum

Dickson Mounds Museum (DMM) in central Illinois has been ground zero for the intersection of archaeological practice, Native American rights, and the responsibilities of a state museum. For over 60 years, DMM presented viewing of an open excavation of over 250 Mississippian period (AD 1100–1300) burials left in situ. Additional burials were excavated and removed prior to construction of the current building, which opened in 1972. After a national-level controversy embroiled DMM, the burial display was closed in 1992 and sealed beneath a cedar floor. Nonetheless, the site remains an open wound for Native people and represents a critically unfinished historical baseline for Native American relations in Illinois and beyond. The Illinois State Museum (ISM) is practicing decolonizing methodology as it shapes its future and reenvision museum spaces in partnership with Native peoples. Building trust, and hopes of reconciliation, necessarily begins with repatriation of more than 1,100 Native American ancestors and 6,300 funerary objects from the Dickson Mounds site. Since 2020, the ISM and DMM have been working with a consortium of Tribal Nations to develop processes that facilitate respectful repatriation. This poster shares what we have learned as NAGPRA practitioners and museum professionals during this project.

Morgan, Brooke (Illinois State Museum)

[97]

Discussant

Morgan, Christopher (University of Nevada, Reno)

[94]

The Radiocarbon Record and Precolonial California

Radiocarbon summed probability distributions (SPDs) have become increasingly popular as means to track demographic trends, and by association, any variety of explanations for changes in past behavior. This paper uses SPDs from across California to develop hypotheses as to the ostensible effects of climate, technological change, population movements, and demography itself on human behavior. These hypotheses are then critically reviewed per the method and theory behind using SPDs in archaeology and within the context of the limitations of the region's archaeological record.

Morgan, Linda, Chris Loendorf (Gila River Indian Community) and M. Kyle Woodson (Gila River Indian Community)

[88]

O'odham Pottery: Prehistoric, Historic, and Contemporary Native American Ceramic Production in the Phoenix Basin of Southern Arizona

The Phoenix Basin in southern Arizona has some the earliest evidence of utilitarian plain ware pottery anywhere in the US Southwest, with associated radiocarbon dates as early as ca. 350 BC, and ceramic production has continued unabated since that time. Although researchers have extensively studied prehistoric pottery in the region, which has long been considered to be the heartland of the "Hohokam," less attention has been devoted to Native American ceramics that were made there in the historic period, and modern Indigenous potters remain largely overlooked. This paper presents recent research by analysts from the Gila River Indian Community Cultural Resource Management Program. This work has shown that while there are temporal and regional differences in ceramic production, including the red-on-buff pottery that the region is most famous for, there are also strong similarities in ceramic production through time and across much of southern Arizona. These similarities in ceramic traditions, including the use of the paddle and anvil construction technique, demonstrate the long-term continuity in cultural traditions from prehistory through today.

Moriarty, Ellen (Vermont State University) and Matthew Moriarty (Vermont State University)
[203]

Scanning at the Artifact Roadshow: 3D Imaging as an Outreach Tool in Community Archaeology

Community outreach has played a major role in the Castleton Hidden History Project, which highlights a diverse and inclusive history of the Castleton, VT, area from the end of the Ice Age through the present day. Since 2023, a significant part of outreach programming has consisted of “Artifact Roadshows,” and 3D imaging is a central tool in these efforts. Hosted in Castleton and surrounding towns, community members of all ages are invited to bring artifacts found around their homes to the roadshow. Archaeology professors and students provide information about each item and document it in various ways, including 3D scanning. This work has multiple benefits: digital models are entered into the “Hidden History” online database, expanding our knowledge of local prehistory and history of the Castleton area. Taking 3D technology outside of the purview of museums and academic institutions, completed models are also shared with objects’ owners to provide a resource should the original become lost or broken. This mutual sharing of information builds community linkages and facilitates a deeper understanding of the Castleton area.

Moriarty, Ellen [203] see Moriarty, Matthew

Moriarty, Ellen [203] see Nash, Jacqueline

Moriarty, Matthew (Vermont State University)

[292]

Discussant

[203]

Chair

Moriarty, Matthew (Vermont State University) and Ellen Moriarty (Vermont State University)
[203]

Capturing and Sharing Vermont’s Past: 3D Imaging as a Tool for Undergraduate Research and Community Engagement

Since 2019, the Vermont State University Digital Archaeology Project, in partnership with the Castleton Innovation Lab, has focused on documenting and sharing Vermont’s past through the use of diverse 3D technologies. Our activities have included documenting both archaeological and private artifact collections, collaborating with museums to create interactive and online content, and extensive outreach with K–12 school groups. 3D technologies have proven to be highly effective for digitally curating artifacts, reaching new online audiences, and connecting with younger students. The application of 3D imaging has also proven to be a remarkably effective tool for undergraduate research. Undergraduate archaeology, geography, and history students, trained in advanced 3D imaging and provided with open access to state-of-the-art 3D scanners, have engaged with Vermont’s past in new and innovative ways. Their work, in turn, has provided fresh opportunities to engage local communities. A review of ongoing work highlights the benefits of collaborative undergraduate research utilizing 3D imaging technologies to capture and share Vermont’s past with the public.

Moriarty, Matthew [203] see Cabral, Devyn

Moriarty, Matthew [203] see Moriarty, Ellen

Morin, Jesse [87] see Efford, Meaghan

Morisaki, Kazuki [42] see Iizuka, Fumie

Morley, Mike [55] see Dewar, Genevieve

Morley, Mike [225] see Stewart, Brian

Morningstar, Dylan [130] see Conolly, James

Moroni, Adriana [126] see Falcucci, Armando

Morris, John [251] see Chase, Adrian

Morris, John [251] see Chase, Arlen

Morris, Margaret (Scripps Institution of Oceanography, UCSD), Isabel Rivera-Collazo (Scripps Institution of Oceanography, UCSD) and John Hildebrand (Scripps Institution of Oceanography, UCSD)

[92]

Mapping the Younger Dryas Landscape of the San Dieguito Paleochannel

Humans had established presence on California's Channel Islands by the Younger Dryas (YD) period (~12.9–11.7 ky BP), during which stable sea level was relatively stable for ~1 ky. No archaeological sites from this time have been identified on the nearby continental shelf, likely destroyed by subsequent rapid sea-level rise, but submerged paleochannels exhibiting landscape and sediment preservation could harbor archaeological materials. We mapped the paleochannel offshore the San Dieguito Lagoon in Del Mar, California to reconstruct the YD landscape. We imaged the subsurface by sub-bottom profiling and identified the YD paleoshoreline between 57–60 m depth, ~3 km from the current coastline, to delineate the subaerial portion of the landscape and constrain local sea level. Analysis of three sediment cores, one containing a transition from possible wetland to beach to terrestrial sediments dating between 12.9–11.7 ky cal BP, evidences landscape transitions near the beginning and end of the YD. The sub-bottom data revealed a layered channel which, combined with adjacent core dates, suggests preserved paleosurfaces from the YD or earlier. Such preservation demonstrates that the channel survived drowning enough to preserve information about southern California's early humans and the climate and sea level changes they experienced.

Morrison, Blythe [268] see Kellner, Corina

Morrison, Kathleen [288] see McKenna, Moriah

Morrow, Giles (Vanderbilt University)

[30]

Chair

Morrow, Giles (Vanderbilt University) and Branden Rizzuto (University of Toronto)

[30]

An Introduction to the Cultural Sequence of the Cañoncillo Archaeological Complex, Jequetepeque Valley, Peru

Intensive archaeological excavations of the Cañoncillo Archaeological Complex in the Jequetepeque Valley (north coast of Peru) have underlined the enduring importance of this region to a sequence of precolumbian communities over the past 2,500 years. Extensive investigations at the Late Formative period site of Jatunca (500 BCE–100 CE), the Late Moche site of Huaca Colorada (650–950 CE), and the Transitional and Late Intermediate period sites of Tecapa and Huaca Dos Cruces (ca. 800–1100 CE) have clarified the chronological limits of these occupations through a campaign of over 100 radiocarbon dates that project members collected between 2004 and 2023. This paper will outline the history of collaborative research in the region from 1997 to the present while also contextualizing the current state of collective scholarship of each distinct occupation area and phase. The availability of such a comprehensive sequence of dates from secure archaeological contexts offers a uniquely nuanced understanding of this important cultural landscape

to a degree seldom undertaken by current scholarship in this region. Ultimately, this presentation highlights the strength of long-term and ongoing collaborative research in a single locale by introducing and contextualizing a series of papers offered by project collaborators on their respective fields of examination.

Morrow, Giles [76] see Berquist, Stephen
Morrow, Giles [30] see Burch Joosten, Katrina
Morrow, Giles [76] see Maciw, Alannagh
Morrow, Giles [30] see Masur, Lindi

Morton, Jake (Carleton College)
[257]

Using Experimental Archaeology to Teach about Ancient Military Technology

This paper looks at addressing specific pedagogical questions in an experimental archaeology classroom using the case study of a lab with a group of 25 students from a variety of majors. The lab explores the development of three ancient Mediterranean military technologies that defeated and replaced each other over 350 years. The students first spend the two class periods preceding the lab reading and discussing ancient accounts of these military technologies and their attendant formations. As we are using proxy data—e.g., we are not using actual weapons but instead modify lengths of PVC tubing and plastic garbage cans and lids; we have small numbers; we are not in an actual conflict—the students are told to focus on three specific questions to see if we can address them: (1) How fast was the learning curve of each technology? (2) How does your personal feeling of safety differ between the three techniques? (3) Why did each formation replace the other? During the lab, group discussions are held after each formation on the research questions. In the class period following the lab we also discuss how proxy data be useful to learn about the past.

Morton, Shawn [295] see Peuramaki-Brown, Meaghan
Morton, Shawn [21] see Wrobel, Gabriel

Morton-Hayward, Alexandra, Beatrix Dudzik (Mayo Clinic, Scottsdale) and Kimberlee Moran (Rutgers University, Camden)
[123]

Multi-omic Analyses of Naturally Preserved Brains from a Philadelphia Cemetery: Insights from Molecular Taphonomy and Implications for Paleopathology

As one of the first organs to decompose postmortem, brains are far more numerous than they should be in the archaeological record. >4,400 preserved human brains dating back some 12,000 years have been reported in the last four centuries; yet archaeological nervous tissues remain little-studied, with <1% explored at the molecular level. During construction at the site of the eighteenth-century First Baptist Church of Philadelphia (FBCP) Cemetery, >60 brains were found within the cranial cavities of otherwise skeletonized individuals. These remains were examined as part of a comprehensive, systematic, and highly interdisciplinary investigation of 12 assemblages ($n > 150$) of archaeological nervous tissues from across North America and Europe, conducted to probe the chemical mechanisms underpinning spontaneous brain preservation. Proteomic and lipidomic analyses by ultrahigh performance liquid chromatography-tandem mass spectrometry have yielded a wealth of biomolecular data not only on the transformation of nervous tissues after death, but which also illuminates health and disease status in the once living. Resolving the processes by which the brain preserves at the FBCP site will ensure that we maximize recovery of the unique bioarchaeological information this most metabolically active organ harbors and enrich our interpretation of this historical community.

Mosquera, Marina [162] see Lombao, Diego

Mosquera Castro, Tania (GEPN-AAT, Universidade de Santiago de Compostela), André Santos (Universidade de Coimbra), Ramón Fábregas Valcarce (Universidade de Santiago de Compostela), Arturo De Lombera-Hermida (Universidad de Oviedo) and Xose Rodríguez-Álvarez (URV. IPHES-CERCA)

[162]

Artistic Currents in Late Paleolithic Times: An Approach from the Northwest of Iberia

Traditionally, the distribution of Paleolithic art was limited to the so-called “Franco-Cantabrian area,” but the distribution of this graphic phenomenon has enlarged with the identification of new sites in different parts of the Iberian Peninsula. Previously, the northwest of Iberia, roughly delimited by the valleys of the Nalón and Duero Rivers, was considered an area lacking in artistic evidence. This view changed from with new discoveries in the 1980s—both on parietal and portable supports—thenceforward integrating this territory into the graphic dynamics of the Iberian Peninsula. The Cova Eirós site is the only cave with rock art in NW Iberia, with some representations that—according to the dates obtained and their stylistic characteristics—date to the end of the Late Paleolithic (Finipaleolithic) stages. Based on the analysis of a group of painted and engraved zoomorphs from this cave, our aim is to investigate the similarities and differences with other images from the northwest and beyond. By means of this approach, both the common features and the particularities observed in several sites will be assessed and the possible existence of contacts among different Paleolithic communities suggested.

Mosquera Castro, Tania [162] see De Lombera-Hermida, Arturo

Moss, Bryan [232] see Powis, Terry

Motta, Laura [256] see Heinrich, Frits

Mouquet, Arthur [185] see Housse, Romuald

Moyes, Holley (University of California, Merced), Jaime Awe (Northern Arizona University), Christophe Helmke (University of Copenhagen) and Jon Spenard (California State University, San Marcos)

[251]

Contributions of Belize Cave Research to Ancient Maya Studies

Throughout the Maya area, caves are recognized as unambiguous ritual contexts that provide scholars with a glimpse into the ritual life of ancient people. Religious ritual was not epiphenomenal as some theoretical stances would argue, but was intertwined with the social and political fabric of ancient Maya society. Therefore, cave archaeology is in a privileged position to comment on many aspects of Maya studies from politics to poetics. Caves figured prominently in sacred geography, providing powerful venues for leaders to propitiate earth and underworld deities and to establish relationships with them that underpinned political power and helped to establish and maintain rights to rule. Caves were considered to be entrances into the earth as well as conduits to the underworld; the stone houses of deities and ancestors; and as living, breathing, entities themselves possessing life-force. From cave deposits we can infer relationships between socio/political and environmental stresses and ritual transformations. We can locate political maneuverings, understand differences in ritual practice among communities, and understand Maya aesthetics. Cave chronologies provide information about settlement and abandonment of a region, and help document of war events. Here, we review significant contributions of previous and ongoing cave research in Belize to ancient Maya studies.

Moyes, Holley [321] see Rissolo, Dominique

Mrozowski, Stephen (Fiske Center for Archaeological Research, University of Massachusetts, Boston)**[258]***Heritage, Pragmatism, and Indigenous Collaboration*

Over the past 20 years, I have worked with the Hassanamisco Nipmuc of Massachusetts with the express goal of seeing how archaeology can aid the Nipmuc with their own heritage initiatives. In all these efforts, the centrality of pragmatic philosophy has been paramount. Given that North American pragmatic philosophy has strong roots in Indigenous practice, this paper outlines some of the critical intersections between pragmatism and Indigenous archaeology. An openness to indigenous knowledge, direct collaboration with the Hassanamisco, and a commitment to an open research process has resulted in an emphasis on linking Indigenous pasts to Indigenous futures. Our work with the Hassanamisco has also led to a rethinking of heritage goals that challenge traditional archaeological practice that have a profound impact on how Indigenous histories are pursued through collaboration.

Mueller, Johannes [38] see Biehl, Peter

Mueller, Natalie (Washington University, St. Louis) and Elizabeth Horton (Rattlesnake Master LLC)**[82]***Life in the Ruins: Historical Ecology in Settler Colonial and Industrial Landscapes*

Throughout the western hemisphere, historical ecologists working with Indigenous experts have made profound discoveries about the ways in which seemingly pristine ecosystems were shaped by Indigenous knowledge and practice over the course of thousands of years. Key methodologies include surveys of biodiversity and ecosystem structure around archaeological sites and/or ethnoecology, which applies a Western scientific lens to Indigenous knowledge. These approaches are complicated in the US Southeast by the scale and severity of colonial destruction: nearly all of the forests have been clear cut, prairies have been eliminated, and the vast majority of rivers have been modified, transforming floodplains and wetlands. Southeastern landscapes are dominated by simplified industrial ecosystems of commodity crops. Native species continue to be driven to extinction by introduced predators and pathogens and settler colonial land use. The vast majority of the Indigenous people of the Southeast were forcibly removed from their homelands, interrupting their care of the land and making it harder for communities to practice and reproduce ecological knowledge. Despite these immense challenges, it is possible to practice historical ecology in the Southeast, and doing so can provide insights into how to understand and rehabilitate industrial and colonized landscapes around the world.

Mueller, Natalie [202] see Belcher, Megan

Mueller, Natalie [151] see Grillo, Katherine

Mueller, Rachel, Christine VanPool (University of Missouri) and Todd VanPool (University of Missouri)**[266]***The Context and Meaning of Medio Period Casas Grandes Stone Effigies*

This project presents the analysis of ground stone effigies from Paquimé, Chihuahua, Mexico. Paquimé was the center of the Medio period (AD 1200–1450) occupation of the Casas Grandes region. These effigies are small figurines ground to resemble humans and animals. Our analysis, based on Di Peso et al.'s (1974) Casas Grandes report, indicate that mountain lion and bear pendants were most common animal forms, although many other animals were also present. The context and form of these effigies are consistent with ethnographically documented use of similar effigies among the historic and modern southwestern Native American cultures in which males primarily used these effigies for healing and hunting rituals. Human ground stone effigies could take the form of large 0.5 m tall effigies of the entire body or smaller effigies of human

heads. Phallic shaped objects are likely effigies of male genitalia as well. The larger human effigies are likely statuary items that are tied to specific ritual locations whereas the smaller heads and phallic effigies have a broader distribution across the site.

Muhammad, Simone (California State University, Fullerton)

[278]

Clay, Culture, and Chains: Unearthing Underrepresented History through Pottery Production on St. Croix, USVI

While scholars have long studied the pottery production of African peoples in the Caribbean during the colonial era, there has been minimal archaeological research on the ceramics used by enslaved African and African-descended peoples on St. Croix, USVI. This paper represents the culmination of thesis research to conclusively establish defining characteristics of Afro-Crucian ceramics during the Danish colonial era. With the ceramic assemblage excavated by the Estate Little Princess Archaeological Project Field School (2018–2023), I utilize a combination of LA-ICP-MS testing and macroscopic examinations to determine key components such as paste recipes, potential clay sources, and vessel types. This research is bolstered by a collaboration with St. Croix's Caribbean Earth Skills program to conduct an experimental project comparing contemporary locally produced pottery with identified Afro-Crucian ceramic vessel types. Contextualized by participatory ethnographic research and archival records, this historical archaeological approach builds the capacity to recognize and memorialize the experiences and everyday contributions of Afro-Crucians whose persistence against the confines of slavery irrevocably shaped the development of St. Croix.

Mukherjee, Koel [105] see Belcher, William

Mullen, Damon (Ohio State University; Kent State University; University of Akron)

[61]

Toward the Development of a Temporal GIS for the Study of the Peopling of the Americas

The Peopling of the Americas remains a provocative topic in both North and South American Archaeology. Speculation about who the indigenous inhabitants of the Americas were, where they came from, and how they got here, began the moment European explorers first encountered them. Current archaeological data and theory indicate humans had reached the landmass of North America south of the Cordillera and Laurentide ice sheets at least by 16.5 ka and to the far south of South America by 14.5ka. Understanding the dates different routes were viable in relationship with known sites, climatic parameters, and genetic data is important in determining the pathway(s) traversed by the First Migrants into the Americas. This paper discusses the development of a geographic information system (GIS) and database to incorporate climate, archaeology, genetic, paleontology and other types of data as they occurred through space and time in the area commonly referred to as Beringia from about 35 ka through 16.5 ka. This GIS system will serve as a data warehouse specifically focusing on the PotA for archaeological study with a temporal dimension.

Muller, Jennifer (University of Pittsburgh)

[89]

Dismemberment as Postmortem Disablement: The Disparate Mortuary Sites of the Collected

Acknowledgment of the educational value of pathological conditions in human cadavers prompted scholars of anatomy and anthropology to partition bodily tissues of the dissected among their colleagues. This scientific network of shared body parts, for the purpose of specialized study, segregated the divisible body into multiple sites—separate drawers in a laboratory, heart in a mason jar, kyphotic vertebral column hanging in the corner of an office, display cases in museums. Although bio/archaeologists typically study human remains associated with burial sites, mortuary treatments include those practices in which bodies have been manipulated by scientists. Bio/archaeological research of university laboratories and basements permits interrogation of the socially defined value of particular bodies and the ways in which this facilitated dissection and collection. It is argued that individuals who present with corporeal differences, perceived as pathological

or as a defect, were particularly vulnerable to dismemberment and more likely to experience postmortem dis-ablement, defined here by societal prevention of decedent's full participation in culturally desirable mortuary treatments. Efforts to reconstitute and repatriate skeletonized persons is complicated by the multisite formation that characterizes anatomical collections. A thorough analysis of archival documents, where available, have the potential to trace these dismemberments.

Muller, Jennifer [209] see Tucker, Jia

Müller, Noémi [113] see Ogawa, Timothée

Müller, Wolfgang [334] see Esposito, Carmen

Mullins, Patrick (University of Pittsburgh), Amedeo Sghinolfi (Université du Québec à Trois-Rivières), Dana Bardolph (Northern Illinois University) and Elvis Monzon (Universidad Nacional de Trujillo)

[81]

The Ties That Bind (and Break): Persistence and Upheaval in the Post-Chavín Landscapes of the Carabamba Plateau and Moche/Virú Chaupiyungas

Following the dusk of Chavín, the traditional narrative for the Virú and Moche Valleys—as well as many parts of the Northern Andes—has been one of conflict and upheaval. Though the late Early Horizon (~500–200 BCE) and Early Intermediate period (~200 BCE–600 CE) landscapes in these areas surely saw an explosion of fortified and defensive settlements that suggest rampant conflict, overemphasizing such patterns is done at the risk of overshadowing the many examples of persistence and continuity in these same landscapes. Indeed, the post-Chavín highland landscapes of the Carabamba Plateau and Moche/Virú *chaupiyungas* are rich with evidence for wide interregional networks of exchange, the florescence of large highland demographic and political centers, and the expansion of permanent highland colonies into the *chaupiyungas*. This paper explores these themes using a landscape perspective that synthesizes the authors' previous research in the *chaupiyungas* with a recent highland drone survey conducted during the first season of the Carabamba Archaeological Research Project (CARP). Using these data, we reconstruct and articulate some of the ties that bound these post-Chavín highland and chaupiyunga landscapes together while also calling to attention how such ties perhaps began to unravel with the coastal landscapes below.

Mullins, Patrick [299] see Sghinolfi, Amedeo

Mulrooney, Mara [18] see McCoy, Mark

Munley, Cameron

[135]

Chair

Munley, Cameron

[135]

Food for Thought: Exploring the Cultural and Ecological Significance of Greater Antillean Fisheries

The Greater Antilles is an archipelago of islands in the Northern Caribbean (e.g., Cuba, Jamaica, Hispaniola, Puerto Rico, and the US Virgin Islands). These islands are host to a melting pot of unique cultural identities and ecological biodiversity. It is well known that the long-term harvest of marine fishes greatly shaped human cultures and marine ecosystems in the region. Scholars have previously reported on the cultural and ecological importance of fishes to indigenous peoples of the Greater Antilles during the Caribbean

Ceramic Age (~500 BC–AD 1500). Scholarly discussions on the topic of marine fish harvest in the Greater Antilles range greatly from—conversations on the environmental implications of exploiting fish to examining the symbolic and ceremonial importance of fishes within Taíno traditions. I broadly synthesize archaeological findings, ethnohistoric accounts, and ethnographic data to analyze current knowledge pertaining to how the harvest of marine fishes influenced diet, fishing technology, and strategy, ritual/ceremonial practices, as well as marine ecology. Additionally, I comment on trends related to contemporary fishing in the region. I then discern potential future directions in research relevant to multiple facets of the topic described previously.

Muñoz, Cindy [100] see Razo, Mikaela

Munro, Kimberly (New Mexico Highlands University)

[94]

The 2023 Excavations at the Cosma Archaeological Complex, Ancash, Peru: A Journey Down the Rabbit Hole into the Andean Late Preceramic

Excavations at the Cosma Archaeological Complex, located in north-central Peru, have revealed a potential missing link, both temporally and geographically, in understanding the origins of corporate labor and the construction of public monuments associated with the Late Preceramic period. A suite of radiometric dates at two temple mounds with Kotosh-Mito style chambers ranging from 2900 to 2475 BCE were recovered from excavations at Cosma between 2014 and 2016. During the summer of 2023 excavations at the Kareycoto mound, the largest mound in the Cosma basin, exposed a previously unknown underground gallery system, reminiscent of those constructed at the site of Chavín de Huántar located in the Callejon de Conchucos. Previous gallery systems at the sites of Chavín and La Galgada date back to the Initial (1800–900 BCE) and Early Horizon periods (900–200 BCE), while the Kareycoto gallery was found in association with Late Preceramic floors and architecture at the site. This suggests that these architectural features may in fact date earlier than previously thought. This paper will present on the 2023 discovery and its implications for our current understanding of gallery systems in association with the Kotosh-Mito tradition.

Munro, Natalie (University of Connecticut)

[85]

Variability in Human-Animal Interactions at the Emergence of Animal Domestication in Southwest Asia

In his 2002 paper “Breaking the Mold,” Richard Redding wrote that “by focusing on the emergence of tactics of animal use that characterize the Neolithic, we may be missing aspects of the process that are not only interesting but critical to building and testing explanations.” Twenty years later, our understanding of the beginnings of animal domestication has changed substantially from the unilineal perspective that Redding criticized to a multiregional view emphasizing multiple origins, local context, gradual change, and stops, starts, and dead ends. This scenario emerged based on a growing archaeological record demonstrating significant variation in human-animal relationships surrounding the Pleistocene-Holocene boundary in Southwest Asia. This presentation uses Redding’s quote as a jumping off point to reflect on the nature and meaning of this variability. In doing so it touches on the value of assembling the multiple lines of evidence that Redding believed were so important and provides a synopsis of current research on the early emergence and evolution of animal management and domestication.

Munro, Natalie [199] see Lebenzon, Roxanne

Munroe, Emily [68] see Hopwood, David

Munson, Jessica (Lycoming College)**[74]***Discussant***Munson, Jessica (Lycoming College), Matthew Looper (California State University, Chico) and Jonathan Scholnick (Bucknell University)****[323]***Ritual, Politics, and the Structure of Community Networks in Classic Maya Society*

Ritual and performance play important integrative functions in the creation, maintenance, and negotiation of social ties that bind communities together. The shared experience of these public displays establishes strong bonds between individuals, defining their membership in certain social groups while reinforcing cultural norms and values. Rituals, however, are not timeless traditions nor do they simply restore social equilibrium. Rather, such periodic gatherings engage diverse participants in interactive and ongoing political processes that unite and divide across multiple social categories. As emergent and fluid social institutions, communities can be defined by the sense of shared identity fostered by these spatially embedded ritual interactions. This paper examines the degree to which shared ritual traditions structure the formation of interregional community networks in Classic Maya society using inscribed records of these events from dated and provenienced monuments catalogued in the Maya Hieroglyphic Database. Community detection methods identify clusters of sites based on ritual similarity while multivariate analyses examine the diversity of rituals practiced by these groups to explore the underlying differences between them. Results of this study shed new light on the nature of governance and different political strategies employed by dynastic rulers during the Classic period (ca. 250–950 CE).

Murakami, Natsuki [179] see Shoda, Shinya

Murakami, Tatsuya (Tulane University)**[273]***Chair***Murakami, Tatsuya (Tulane University), Shigeru Kabata (Kyoto University of Foreign Studies), Julieta Lopez J. (Universidad Nacional Autónoma de México), Jorge Humberto Toledo (Universidad de las Americas Puebla) and Hironori Fukuhara (Saitama University)****[273]***Recent Advances of the Tlalancaleca Archaeological Project, Puebla, Central Mexico*

Tlalancaleca was one of the largest settlements before the rise of Teotihuacan in Central Mexico and likely provided cultural and historical settings for the creation of Central Mexican urban traditions during later periods. Yet its urbanization process as well as socio-spatial organization remain poorly understood. The Proyecto Arqueológico Tlalancaleca, Puebla, started in 2012 and has accumulated archaeological evidence regarding trajectories of urban development from ca. 800 BC to AD 250/300. This paper presents some recent advances of our research, including excavations and materials analysis. It discusses sociopolitical transformations focusing on the Late to Terminal Formative period.

Murakami, Tatsuya [218] see Matadamas-Gomora, Diego

Muraski, Jill and Carl Blair (Michigan Technological University)**[286]***Conglomerate Mining in the Keweenaw*

In the inaugural season of the Keweenaw Copper Research Collective (KCRC), excavations at the Delaware Copper Mine in the Keweenaw peninsula conclusively demonstrated precontact Indigenous mining in conglomerate rock formations. Archaeologists revealed the conglomerate formation along the Hogan copper vein, recovering banded and expedient hammerstones along the way before landing in various mining pits.

These consisted of sloping pits, or dives, in the formation as well as a circular pit with a depth reaching greater than 1.5 m. Charcoal samples, often found in association with both varieties of hammerstones, were taken from the excavation areas. The results have yet to be returned, though expect to yield dates congruent with precontact mining.

Murillo-Herrera, Mauricio (Universidad de Costa Rica)

[157]

How Unusual Is the Trajectory of Precolumbian Social Change in San Ramón, Costa Rica, among the Trajectories of Chiefdom Development? A Comparison Exercise

Recent literature on comparative archaeology has pointed out the need for systematic comparisons of trajectories of social change that use primary quantitative data and standardized variables. This type of comparison has the potential to discover and explore the diversity and complexity in the processes of social evolution, beyond the sole use of holistic typological categories. The emergence of chiefdoms is a topic, among others, that can be explored more in-depth by using the strategy just described. A first look at the precolumbian trajectory of social change in San Ramón, Costa Rica, shows that this region had both what appear to be typical features in other trajectories of chiefdom developments, as well as highly atypical elements. This first impression needs to be evaluated by a systematic comparison of the San Ramón trajectory with what has been usually taken by the archaeologists as typical trajectories of chiefdom emergence.

Muro Ynoñán, Luis (Los Angeles County Museum of Art), Hoover Rojas (National University of Trujillo, Peru), Renata Verdun (Pontifical Catholic University, Peru), Jhean Carlos Sánchez (Pedro Ruiz Gallo National University, Peru) and Hector Barrera (Pontifical Catholic University, Peru)

[176]

Religious and Political Resilience in the Ancient Moche World: Monumentality, Micro-chronology, and Environment in Úcupe, Lambayeque, Peru (200–900 CE); The Úcupe Cultural Landscape Archaeological Project: First Results of the 2022 Field Season

This poster will present the results of the first excavation campaign of our project (UCLAP) at the Úcupe Archaeological Complex, Zaña Valley, northern Peru. Composed of a dozen of huaca-mounds, Úcupe is an Early Moche (200-400 CE) site that extends over a plateau of 10 ha, located on the southern bank of the Zaña Valley. The site became particularly well known for the finding of spectacular Moche elite burials (e.g., the Lord of Úcupe); however, very little is still known about the development and historical trajectory of its monumental landscape. The goal of our project is to examine co-relationships between the progressive development of the site's monumental constructions and situations of environmental stress and climatic vulnerability that hit the site during Moche times. The 2022 field season of the project was focused on documenting the archaeological complex with diverse remote sensing techniques and excavating the foundations of the most prominent buildings: Huaca El Pueblo and Huaca E2-E3. Preliminary results of our mapping and excavation work and spatial and artifactual analyses of collections recovered are presented and discussed in this poster.

Muro Ynoñán, Luis (Los Angeles County Museum of Art)

[208]

Discussant

Murphy, Kaitlin [213] see Degnan, Bridgette

Murphy, Reg [135] see Brown, Matthew

Murphy, Samantha**[228]***Examining Great Oasis Cemeteries in Iowa through a Population Level Analysis*

Great Oasis is a Late Terminal Woodland culture, dating between AD 900 and 1100, that has produced the earliest evidence for Mississippian contact in Iowa. Great Oasis peoples built unfortified farming villages throughout western and central Iowa, southwest Minnesota, and eastern Nebraska, and South Dakota. Several excavated village sites typically have an associated cemetery that includes both primary and secondary burials with no apparent discrimination based on age, biological sex, or status. This data allows for a community health-based analysis and examination of possible family lineages with the potential for generational health conditions. Researchers have established the overall health of individuals through an examination of the remains for frequencies of pathologies such as, porotic hyperostosis, periostitis, dental caries, and tooth loss. Nondestructive comparative examination of three Great Oasis cemeteries in Iowa have led to a better understanding of health overall during this period. Excavated in the 1960s, the ancestors from these cemeteries have been documented in the NPS NAGPRA database and published Notices of Inventory Completion and are currently reposed by the Iowa Office of the State Archaeologist Bioarchaeology Program awaiting repatriation to the 26 tribes that have ancestral ties to the state.

Murphy, Shambri (Chronicle Heritage)**[183]***The Presence of Fraxinus in Hohokam Pithouses*

This paper will investigate the presence of ash wood (*Fraxinus* sp.) in the context of burned pit houses of the Hohokam culture by comparing the botanical remains in burned pit houses to remains from unburned pit houses from previous data recovery projects in Arizona. To further understand the purpose of *Fraxinus* in burned pithouses, previous ethnobotanical studies of indigenous tribes such as the Hopi and O'odham and their use of *Fraxinus* will be consulted. In order to understand the effects of *Fraxinus* in a burned context, experimental methods will be utilized and recorded to compare the smoke output from a fire utilizing *Fraxinus* as a fuel source in contrast to other fuel sources commonly found in pit houses in the region. All methodology and results will be recorded to further understand how the presence of *Fraxinus* may contribute to a ceremonial atmosphere due to observable differences such as intensity or color of the smoke output or smell. Results of research from data recovery, ethnographies, and experimental methodology will be used to assess the presence of *Fraxinus* in burned pit houses and how it may contribute to the overall atmosphere of ceremonial burnings.

Murray, John (Arizona State University, Institute of Human Origins), B. Patrick Fahey (Arizona State University) and Cindy Hsin-yee Huang (Arizona State University)**[306]***Further Considerations of Tip Cross-Sectional Area for Determining Projectile Systems*

The origins and evolution of projectile technology have been a major research focus in paleoanthropology because projectiles are thought to have had crucial impacts on human adaptation and dispersal in the Pleistocene. Projectile technologies are often used as a proxy for changes in human cognition, cooperation, hunting strategies, and interpersonal or intergroup conflict. Mechanically assisted projectile systems, such as the bow and arrow, are thought to have provided a significant adaptive advantage over hand-thrown spears on some prey types due to the increase in power, accuracy, and range. Therefore, it is imperative that paleoanthropologists determine when and where these projectile systems arose and in what contexts they were utilized. Hughes (1998) developed a method for determining projectile systems that is based on tip cross-sectional (TCS) measurements. Our study expands on Hughes's approach, using Bayesian statistics to determine which projectile systems can be reliably distinguished using distributions of TCS metrics from a sample of ethnographic and archaeological tools of known function. Further, we consider other factors that may impact our ability to infer projectile technology using TCS such as raw material quality. This research has implications for the reliability of TCS methods as one line of evidence for identifying projectile systems.

Murray, Wendi (Wesleyan University) and Julie Unruh (Julie Unruh LLC)**[305]***Bags, Biomarkers, and Biographies: Keeping up with Archaeological Science in the Collections Repository*

Walk through any archaeological collection and you walk through a historical archive of collections storage practices. Best practices for collections storage evolve as materials science evolves, and storage decisions are realigned to maximize research potential. However, determining appropriate parameters for archaeological collections storage is complicated not only by varied research interests, but increasing concern about sample damage or contamination across diverse archaeometric methods. Given that storage history can play a major role in sample viability, collections managers have a crucial role to play in this evolving field. Concerned about the disconnect between archaeometric research needs and collections storage decision-making, we interviewed 13 researchers about nine different archaeometric methods—interview questions focused on issues of sample integrity/viability, potential causes of contamination, and how storage decision-making can impact research results. We share researcher insights about appropriate sample storage, highlight the need for more consistent dialogue between archaeological researchers and collections stewards, and suggest avenues for further research.

Mursell, Ian (Mexicolore, London, UK)**[322]***Discussant*

Mustone, Gaia [116] see Tykot, Robert

Mutri, Giuseppina [151] see Grillo, Katherine

Myagmar, Erdene [23] see Hrivnyak, Michelle

Myerscough, Autumn**[286]***Bone “Awls” of the Southwest*

Through conducting a microwear analysis, I argue that the use wear of the bone tools examined will determine their functional use. The collections of bone tools for this study are from various Mimbres (AD 200–1130) and Chacoan (AD 850–1250) sites (located in the North American Southwest). Many bone artifacts with narrow, pointed distal ends are defined as awls traditionally. Awls are generally defined as tools used to pierce holes in leather or other malleable substances. I argue that a detailed microwear analysis may suggest alternative uses of these types of bone tools beyond the narrow category of “awl.” Through this research I encourage my audience to ask if it is proficient to define awls by their morphology (tools with a narrow, pointed distal end) despite these tools possibly having varying functions. Through a comparison of bone tools from both types of sites in the study area, I intend to demonstrate that these bone tools commonly thought of as awls, may serve a variety of functions rather than the narrowly proscribed categories they are traditionally sorted into.

Mykhailova, Nataliia (Institute of Archaeology NASU)**[25]***Deer Offerings in the Stone Age of Eurasia*

The Deer Cult was a primary element of the myth-ritual complex of ancient hunter-gatherers. Deer worship included rituals related to natural and economic cycles, including the human life cycle. In the Upper Paleolithic, accumulation of deer antlers in caves in Western Europe and the Urals as well as images of deer

or deer heads in the monumental and portable art of the Franco-Cantabrian area are evidence of rituals devoted to the reproduction of deer. During the Mesolithic-Neolithic period of Northern Eurasia, the image of deer and elk became dominant in the myth-ritual complex. This rock art reflects the rituals of cervid reproduction and additional archaeological material point to the existence of sacrificial rites of deer and moose which over time developed into multilayered sanctuaries. Sacrificial offerings of deer, especially buried body parts or complete skeletons, found in Neolithic-Chalcolithic archaeological sites in Central Europe indicate that elements of the Deer Cult continued well beyond the transition to agriculture. The use of deer remains in agricultural magic is still well known among the peoples of North and Central America.

Nadel, Samantha (Boston University) and Everardo Tapia Mendoza (UNAM)
[282]

Preservation, Degradation, and Contamination: The Chemical Identification of Cochineal in Archaeological Environments

Although cochineal has played an important role in Mesoamerican societies, a lack of suitable methods has hampered its investigation by archaeologists. Luckily, recent developments in organic residue analysis suggest the possibility that cochineal production may be identified in the archaeological record through identification of carminic acid, its primary source of color. Prior to its application to archaeological materials, however, experimental archaeology must be conducted to build comparative datasets and establish the efficacy of methodological protocols. Experimental production of cochineal products was done to test the hypothesis that carminic acid residues form and preserve in inorganic matrices buried in archaeological environments. The ceramic and ground stone tools were analyzed chemically (HPLC with MS, DAD-MS, and/or MS-MS) before and after burial underground for one year. Although carminic acid concentrations did decrease modestly, most tools maintained measurable quantities of the water-soluble biomarker. In several samples, a distinctive spectral pattern indicative of carminic acid's degradation, though crucially not beyond recognition, was identified. Furthermore, this analysis validated the use of tools' inactive surfaces as controls for environmental and laboratory contamination. This poster concludes by reporting preliminary results from similar chemical analysis conducted on hypothesized cochineal production tools from Late Postclassic–early colonial Tlaxcala.

Naegele, Kathrin (Max Planck Institute for Evolutionary Anthropology), Silvia Teresita Hernandez Godoy (University of Winnipeg) and Yadira Chinique de Armas (University of Winnipeg)
[135]

Connecting Archaic Age Communities in the Insular Caribbean

The study of ancient Caribbean communities through archaeogenomic methods has seen an increased interest in recent years. In our study in 2020, we demonstrated that the Archaic Age communities in the Greater Antilles exhibit a different genetic signal from the Ceramic Age communities in the Greater and Lesser Antilles. Still, we could not add more detail beyond those previously obtained from archaeological research. The low genetic variation—a consequence of repeated bottlenecks in the settlement processes of the Americas and the Insular Caribbean—imposes strong limits on the identification of genetic diversity, leaving open many questions about the interactions between and within precolonial communities during and at the end of the Archaic Age in the islands. This presentation provides a critical review of the potential and limitations of ancient DNA research in the understanding of genetic diversity in the Insular Caribbean and deploys newly developed methods identifying genetic relationships based on segments identical by descent (IBD). This method provides a new resolution in investigating connections and interactions between communities, exemplified here on the analysis of the genomes obtained from Canimar Abajo and archaeologically similar communities in the insular Caribbean.

Nagao, Debra (Independent Researcher)
[214]

Discussant

Nagaoka, Lisa (University of North Texas), Jonathan Dombrosky (Crow Canyon Archaeological Center), Steve Wolverton (University of North Texas), Emily Lena Jones (University of New Mexico) and Susan Ryan (Crow Canyon Archaeological Center)

[200]

A Differential Recovery Checklist for Zooarchaeology in the US Southwest

Differential recovery refers to the ways that faunal assemblages are sampled from the archaeological record. Its effects can be pernicious when interpreting data from multiple assemblages. As such, the topic is a mainstay in contemporary zooarchaeological research; however, in the US Southwest differential recovery has received less attention. One reason could be the excellent archaeological preservation of faunal remains in the region. Researchers may be more inclined to assume representativeness without consideration of differences in recovery among faunas. Here, we explore the interaction between recovery and other taphonomic variables from multiple large faunal assemblages recovered from the central Mesa Verde Region of southwestern Colorado and the Northern Rio Grande of north-central New Mexico. We analyze faunas from five sites: Tsama'uinge (LA 908), Ponsipa'akeri (LA 297), Shields Pueblo (5MT3807), Goodman Point Pueblo (5MT604), and the Haynie site (5MT1905). These sites represent varying degrees of sampling intensity and disturbance, spanning a continuum from low- to high-quality recovery. Our goal is to propose a suite of basic analyses to assist Southwest archaeologists in making decisions about the inclusion of individual faunal assemblages in large datasets. A standard checklist can improve data quality and strengthen interpretation in this region of extreme cultural significance.

Nagaoka, Lisa [249] see Wolverton, Steve

Nagy, Balázs [130] see Riebe, Danielle

Nagy, Iman [231] see Yakal, Madeleine

Nair, Arvind [101] see Lierenz, Julie

Nango, May [217] see Florin, S. Anna

Nango, May [42] see Huntley, Jillian

Napora, Katharine (Florida Atlantic University), Michael Detisch (University of Kentucky), Jessica Jenkins (Flagler College), Martin Gallivan (College of William and Mary) and Christian Davenport (Palm Beach County Historic Preservation)

[229]

High-Resolution Paleoenvironmental Shell Proxy Data: Implications for South Florida and Beyond

We present exploratory analyses of subannual environmental proxy data from a variety of freshwater, estuarine, and marine mollusk species from South Florida and the broader US Southeast. Using modern baseline specimens as well as specimens from archaeological contexts analyzed via microscopy and associated methodologies, we discuss best practices for shell sample selection and preparation as well as analytical methods. These data sources have the potential to allow for high-resolution reconstructions of environmental parameters in antiquity, including identification of shifts in the lengths of mollusk annual growing seasons. Such reconstructions can aid in improving the temporal understanding of cultural harvesting practices as well as the resiliency and sustainability of mollusk resources during periods of rapid environmental change.

Napotnik, Greta [72] see Lindler, Joseph

Nase, John [228] see Kollmann, Dana

Nash, Brendan [41] see Michalski, Matthew

Nash, Carole (School of Integrated Sciences, James Madison University)
[71]
Chair

Nash, Carole (School of Integrated Sciences, James Madison University)
[71]

Reciprocal Archaeology in the Time of Climate Change

Archaeologists have long recognized that partnerships with practitioners from allied disciplines enrich our contributions and create many-layered interpretations of the sites and communities we study. Working in the context of climate change, collaborations between archaeologists and scientific colleagues have expanded to include descendant communities, policymakers, and citizen scientists. Bringing archaeology to different audiences reinforces the critical place it holds in our understanding of human responses to environmental change, while challenging archaeologists to better communicate the relevance of the discipline. Collaborative practice demands a different kind of relationship, one that values a reciprocity holding archaeologists accountable while creating new opportunities for archaeological research. Collaborative practice transforms our research questions, methods, and knowledge production processes. This poster explores examples of reciprocal archaeology in the Middle Atlantic (North America), with an emphasis on the integration of interdisciplinary knowledge, traditional knowledge, and public history to generate a more unified response to the impacts of climate change on cultural heritage.

Nash, Carole [38] see Biehl, Peter

Nash, Donna (Arizona State University), Patrick Ryan Williams (Arizona State University) and Laure Dussubieux (Field Museum of Natural History)
[86]

Palace Pottery Production on Cerro Baúl: The Particularity of Paste Recipes

Decorated ceramic vessels carried meaningful symbols and were an important element of the Wari Empire's political economy. Wari, a powerful early Andean state, expanded sometime near the middle of the first millennium and pioneered institutions that were refined and deployed by the later Inca Empire. Wari officials used pottery to display, serve, and consume alcoholic beverages. Vessels of different sizes and forms were smashed and incorporated into offerings of several kinds. Smaller pots of varying quality were included in the graves of people with different ranks, and matched sets may have been used for ceremonial toasting or other symbolic actions during ritual performances. Evidence for the production of decorated vessels has been found alongside or embedded in the residences of intermediate elites at Conchopata, a site near the empire's capital, and Cerro Baúl, the polity's furthest southern provincial center. In this paper, results from LA-ICP-MS analysis of raw materials and unfired sherds found in the palace at Cerro Baúl are compared to those from other vessels at the site and in the region to identify what types of pottery were made in the palace and assess their value and distribution.

Nash, Donna (Arizona State University)
[208]
Discussant

Nash, Jacqueline, Nina Neptune (Vermont State University), Devyn Cabral (Vermont State University), Emily Demers (Vermont State University) and Ellen Moriarty (Vermont State University)

[203]

3D Imaging the Granger House Ceramic Collection, Castleton, VT

Since 2019, the Castleton Hidden History Project has conducted excavations around Granger House, a nineteenth-century home on the campus of Vermont State University-Castleton that will become a local history museum. Ongoing interdisciplinary work centers on investigating the National Register-listed structure, the daily lives of its inhabitants, and the dynamic cultural landscape that surrounds the home. Four years of archaeological excavations have produced a wealth of artifacts. In this poster we focus on ceramics and the use of 3D technology to assist research and outreach efforts. Spanning much of the nineteenth century, ceramics recovered at Granger House include mundane cooking vessels, everyday dinnerware, and items that would have had pride-of-place in family collections. 3D scanning of these ceramics has allowed for the creation of a digital artifact repository, with extremely detailed models facilitating research into ceramic technology, styles, and social trends. Digital models are also being used to create interactive displays that will help the general public to interact with and learn about Granger House ceramics when the museum opens.

Nash, Jacqueline [203] see Ludvigsen, Emma

Nash, Steve [111] see Baxter, Erin

Nash, Steve [9] see Gillaspie, Amy

Nash, Steve [88] see Huntley, Deborah

Nassaney, Michael (Western Michigan University) and Erika Hartley (Western Michigan University)

[153]

The Women of Fort St. Joseph, a French Colonial Settlement on the North American Frontier

Forts and fur trading posts conjure images of intrepid soldiers and jovial voyageurs engaged in masculine activities that implicated material objects like firearms, ammunition, smoking pipes, alcohol containers, and trade goods. Male colonial ambitions also structured many of the accounts that persist into the present. Yet, archaeological and documentary records from Fort St. Joseph, an eighteenth-century French mission, garrison, and trading post complex in southwest Michigan, provide ample evidence of women who played an important role in daily life. While much of the evidence is domestic and personal in nature, it nevertheless underscores the significance of women in the success of this colonial enterprise.

Nassaney, Michael (Western Michigan University)

[196]

Discussant

[153]

Chair

Nasser, Julie (New Mexico State University)

[206]

Living in Turbulent Times: Life on the Plaza in Nineteenth-Century Mesilla, New Mexico

The village of Mesilla in southern New Mexico endured a tumultuous nineteenth century. Between 1845 and 1855, Mesilla shifted back and forth between Mexican to US territorial control. During the US Civil War, the Union-controlled town was conquered by Confederates and briefly became the capital of the Confederate state of Arizona until it was reconquered by Union forces and placed under martial law. Conflicts between opposing political ideologies continued in subsequent years, resulting in a notorious shoot-out on the plaza in 1871. Less than a decade later, Mesilla was bypassed by the new Santa Fe Railway and fell into decline.

Nineteenth-century Mesilla serves as both a locus of significant historical events and as a microcosm of the struggles of the American territorial period in the Southwest. This paper draws on archaeological and archival data to see if and how this turbulent history shaped the material lives of Mesilleros living on the west side of the village plaza.

Nasu, Hiroo (Okayama University of Science)

[217]

Use of Introduced and Native Plants by Early Humans in the Japanese Archipelago

This paper presents recent archaeobotanical findings on the use of plants by early humans in the Japanese archipelago. The first humans arrived in the Japanese archipelago about 38,000 years ago. Although there are not many archaeobotanical records from this period, pine seeds, hazelnuts, and acorns have been found, suggesting that these plants, which were native to the Japanese archipelago, were used as food. As the climate warmed and stabilized around 10,000 years ago, the number of settlements increased, and the evidence of plant use also increased. Gourds, hemp, and lacquer trees found from this period have no wild species in the Japanese archipelago today. It is possible that these plants were brought from the continent as important tools used for containers, fibers, and paints. Wild annual plants such as barnyard millet, soybean, and azuki bean originally grew wild in the Japanese archipelago and are thought to be early weeds that adapted to the open areas (disturbed environment) created by deforestation for settlement, and their usefulness as food was discovered by the Jomon people. Their seed size increased during the middle to late Jomon period (4,500–3,500 years ago), suggesting that domestication may have occurred in the process of using these plants.

Nasuh, Engin [141] see Angeloff, Nick

Naudinot, Nicolas (Muséum national d'Histoire naturelle), Mathieu Langlais (CNRS-PACEA), Jérémie Jacquier (CReAAH-CNRS) and Lynden Cooper (Pre-Construct Archaeology)

[219]

The “Three Sides” of the Emblematic Early Azilian Blades with Flat Retouch along the Atlantic Façade

Recent research allowed us to draw a better picture of the period around 14,000 cal BP, the theater of a shift between Magdalenian and Azilian technical concepts. The rhythm of this changing is still difficult to describe precisely because of a radiocarbon plateau and the scarcity of Early Azilian (EA) sites excavated in good contexts with modern methods. These last years, the discovery of Le Rocher de l'Impératrice rockshelter in Brittany and the restudy of Murat Rockshelter in southwest France bring key information about this period characterized by a major cultural shift. Integrated techno-functional analysis of the lithics from these sites particularly focused on blades bearing flat retouch on their cutting edges. This typological form is particularly emblematic of these sites and others reported to EA. These blades and their characteristic form are the result of a long biography alternating phases of use and maintenance according to specific modalities. Our study allowed us to understand the functioning of these tools and track the diffusion of this concept along the Atlantic façade of Europe and to start thinking about the implications of these results for our understanding of the dynamics of idea diffusion and system transformation during this pivotal period.

Navarro-Farr, Olivia (College of Wooster), Mary Kate Kelly (Mount Royal University) and David Freidel (Washington University [Emeritus])

[159]

The Snake Queens of Waka: Harnessing Sorcery and Divinatory Power in Service to Kaan

Our paper demonstrates the key role played by royal Kaan women in fortifying and consolidating Kaan's hegemony in the seventh–eighth centuries CE. We draw on archaeological, visual, and textual evidence from Waka', including a preliminary analysis of recently discovered Stela 51, and elsewhere across the realm. We address how the political actions of royal women served to consolidate the Kaan realm, helping to create the so-called “Golden Age” of their Late Classic supremacy. These women anchored themselves materially and

symbolically within the built landscapes they ruled and established enduring bonds through blood and political maneuvering. Part of these political consolidation efforts, we have learned, drew on the healing, restoration, and reincorporation of ruptured Early Classic monuments whose inscriptions had linked Waka's Early Classic nobility with key entrada figures, including Sihyaj K'ahk' and Spear-Thrower Owl. We argue that Lady K'abel endeavored to associate her legacy with the Early Classic Waka'-Teotihuacan connection, which itself was arguably founded on Waka's role as a place of prophesy. The implications of our findings contribute to a more nuanced understanding of Late Classic political history and have enduring significance for Indigenous women in the Americas today.

Navarro Sandoval, Fernanda (INAH Michoacán) and José Luis Punzo Díaz (INAH Michoacán) [290]

Habitar en el Irechequa Tzintzuntzani: Resultados preliminares del análisis lidar

Como parte del proyecto "Prospección Arqueológica de Tzintzuntzan, Antigua Ciudad de Michoacán", se analizó el paisaje norte de la cuenca del lago de Pátzcuaro para identificar la extensión de las modificaciones hechas en las laderas de los cerros, mediante la construcción de terrazas. A través de diversas técnicas de realce (como sombreados digitales multidireccionales, *sky-view factor* y clasificación de pendientes) aplicadas en un MDE derivado de lidar, se hizo un importante registro individual de terrazas y plataformas prehispánicas en un paisaje mixto, es decir, con áreas con vegetación de bosque de pino encino, áreas agrícolas y deforestadas, así como zonas urbanas modernas. En consecuencia, por primera vez, contamos con un registro individual de terrazas, su ubicación y disposición en gran parte del paisaje. De esta forma, presentamos los datos preliminares de un estudio que busca extender las investigaciones fuera del núcleo más denso de la ciudad, aportando un gran corpus de datos para comprender la manera en que los antiguos tarascos habitaron y construyeron un espacio complejo, a través de la organización familiar y que permitió el crecimiento de una de las ciudades más importantes para el Posclásico Tardío en Mesoamérica.

Navarro Sandoval, Fernanda [106] see Garcia Lopez, Carmen

Navas-Méndez, Ana (Illinois State University), Brandi MacDonald (University of Missouri) and Daniel Pierce (Missouri State University) [118]

Characterization of Mendoza and Cortezo Pigments: Communities of Practice and Ceramic Production in Precolumbian Panama (AD 1300–1500)

We present the results of an exploratory pigment characterization of the Mendoza and Cortezo Red-Buffer ceramics. These ceramic styles produced from CE 1300 until the first part of the Spanish colonization tend to appear in association (Mendoza-Cortezo complex). Mendoza, distinguished for the ceramic plates decorated with polychrome geometrical designs arranged in concentric panels, marks the end of the polychrome tradition in Central Panama. Cortezo Red-Buffer is utilitarian pottery with red paint restricted to the lips, rims, or brushstrokes. Previous historical and archaeological research suggests organic and inorganic ingredients potters used to produce pigments. For this research, the surface of 20 samples was analyzed with laser ablation-inductively coupled plasma-mass spectrometry (LA-ICP-MS) to identify the composition of the black, white, and red pigments. These results are compared with the compositional recipes obtained with NAA to learn more about the production of precolumbian ceramics. This paper contributes to understanding communities of practice production of utilitarian and prestige items circulated in the Gran Coclé right before the Spanish colonization.

Ndiema, Emmanuel [126] see Reeves, Jonathan

Ndour, Sidy (University Laval)**[42]***Petrographic and Chemical Analysis of Ceramics of the Atlantic Period of Baol (1400–1900), Historical Kingdom of Northern Senegambia*

The petrographic and chemical analysis of ceramic shards from the Senegalese Atlantic period (1400–1900) is the weak link in archaeological research in Senegal. Archaeological surveys and excavations carried out for my doctoral thesis yielded several artifacts, including local ceramics. A qualitative study of the ceramics collection was carried out through petrographic and chemical analyses of a sample of 39 shards. This poster presents and interprets the results. The petrographic and chemical analyses of the ceramic samples made it possible to determine the nature of the temper used, thereby offering clues on the geographical origin of the ceramics and the nature of regional exchanges at Lambaye, capital of the historic kingdom of Baol in Senegal.

Neciosup, Pedro [13] see Ochatoma Cabrera, Jose

Needham, Andy and Stephanie Piper (University of York)**[147]***Breaking Down Boundaries through Collaborative Learning Communities: Integrating Outdoor Teaching into a Year One Introductory Archaeology Course*

Studying a non-school subject such as archaeology at university can be challenging. This knowledge gap can compound barriers for new students, including living away from home, arranging a new job, and making friends. Creating a collaborative learning community is therefore important for encouraging student engagement with unfamiliar teaching methods and a new subject matter. We present our reflections and observations from teaching a first-year undergraduate course: Artifacts and Materials. This course aims to introduce students to artifacts from diverse periods and places and how archaeologists analyze and interpret them, using lectures, seminars, and outdoor practical workshops. To address the combined pedagogic challenges of creating inclusive and collaborative learning communities, and enable deep learning of unfamiliar objects, materials, working techniques, and cultural settings, an integrated program of outdoor experimental archaeology was used to augment traditional classroom-based teaching methods. Student feedback suggests this combination can support the creation of a positive learning community. Shared practical tasks can encourage diverse contributions and support peer-group formation by discussing objects together. The experience of working with materials firsthand can encourage deeper learning. Finally, students noted that working in this outdoor space can promote well-being by reducing stress and anxiety and promote sociality.

Needham, Andy [257] see Little, Aimée

Neeley, Michael (Montana State University) and Craig Lee (Montana State University)**[265]***The Curation Continuum: An Example from the Henry Smith Site in Northeastern Montana*

Forager mobility is often linked to the organization of technology through the continuum of curated and expedient technologies. Curated technologies are expected to be associated with higher levels of mobility reflecting transport costs and longer use histories, in response to reduced access to raw materials. In contrast, expedient technologies are more closely associated with reduced mobility, lower artifact transport costs, shorter artifact use histories, and greater access to raw materials. With the curated-expedient dichotomy in mind, we examine the lithic materials from the Henry Smith site (24PH794), a late precontact bison kill in northeastern Montana. Our poster focuses on the use of cortex ratios to assess technological organization, the role of core and chopper classification in determining these ratios, and the core reduction strategy of local quartzite cobbles that results in large quantities of cortical flakes. Preliminary results indicate low cortex ratios which suggest an organizational practice of off-site lithic transport. Additionally, we explore how these values can be influenced by the variable classification of cores and choppers.

Neff, Hector (California State University, Long Beach), Heather Thakar (Texas A&M University), Clifford Brown (Florida Atlantic University), John Jones (Independent Researcher) and Chad Rankle (University of California, San Diego)

[157]

New Evidence on the Early Occupation of the Lakes Basin of Pacific Nicaragua

Evidence for early sedentary villagers is perplexingly difficult to identify in Pacific Nicaragua. Wolfgang Haberland thought he found Early Formative remains, which he named the Dinarte phase, on Ometepe Island, but our own efforts to resample those putative early deposits did not meet with much success. More productive have been our efforts to take a broader, whole-landscape approach. Sediment cores from the edge of Ometepe Island and from the Lake Managua (Xolotlan) shore just east of Managua document farming around both lakes by shortly after 1000 cal BC at the latest. On the slopes above Lake Managua, a paleosol below a thick volcanic sand deposit at La Arenera contains maize and cotton pollen with an inferred date of around 900 cal BC. This paper reviews this and other recent evidence for early village farmers in the lakes basin.

Neff, Hector [188] see Rankle, Chad

Neff, Hector [121] see Renson, Virginie

Neff, Hector [255] see Schortman, Edward

Neff, Nadia (University of New Mexico), Keith Prufer (University of New Mexico), Geraldine Busquest-Vass (University of New Mexico), Erin Ray (University of New Mexico) and Seth Newsome (University of New Mexico)

[201]

Tracking the Origins of Animal Management in a Neotropical Foraging-to-Farming Population Using Carbon Stable Isotope Analysis of Lysine

The middle-late Holocene in southern Belize saw shifts in subsistence strategies, including the introduction of managed plants and animals. Botanical and stable isotope data have been used to track the introduction of agricultural products into human diets, with maize first consumed before 7000 cal BP. However, the timing of the introduction of managed animals is less understood because early faunal assemblages are rare. Carbon isotope ($\delta^{13}\text{C}$) analysis of amino acids (CSIA-AA) is a powerful tool that allows researchers to track the biochemical origins of these compounds in consumer tissues. CSIA-AA analysis of directly dated human skeletons from two rockshelters spanning the transition to agriculture shows a trend of increasing $\delta^{13}\text{C}$ -lysine values indicating a C_4 -lysine origin in individuals by the Classic Maya period. Additionally, individuals that date to the middle Holocene demonstrate higher-than-expected incorporation of C_4 -derived lysine. Based on the low abundance of lysine in maize (C_4 -plant) and daily lysine requirements in humans, these results are only possible through trophic concentration of C_4 -derived lysine, possibly obtained by consuming maize-eating animals. We propose that human $\delta^{13}\text{C}$ -lysine values can be used to track the incorporation of managed, but not necessarily domesticated, animals into neotropical diets during the transition to agriculture.

Neff, Nadia [194] see Hernandez-Bolio, Gloria

Neff, Nadia [217] see Prufer, Keith

Neff, Nadia [194] see Ray, Erin

Neff, Nadia [217] see Robinson, Mark

Negrino, Fabio [246] see Riel-Salvatore, Julien

Neill, Liam (Scarp Archaeology) and Michael Slack (Scarp Archaeology)

[235]

The World's Largest Archaeological Jigsaw Puzzle: Excavations at Juukan Gorge 2022–2023

Since 2022 a team of archaeologists in collaboration with the PKK People has been re-excavating the Juukan

2 site. Under the rubble of the blast, we have found an in situ cultural deposit with largely intact material culture. This paper describes the process and methodology we have used to find this delicate sedimentary context beneath the blast rubble. We have used a variety of models ranging from ERT to large-scale geological applications to locate the floor of Juukan 2. Ultimately, however, the relocation and excavation has involved good old-fashioned archaeological method as over 200 m³ of backfill and rubble has been delicately removed to reveal a cave floor. Subsequent to its discovery we have embarked on one of the largest archaeological projects ever attempted in Australia, as we attempt to recover the cultural material of Juukan 2.

Neiman, Fraser [89] see Bollwerk, Elizabeth

Neller, Angela (Wanapum Heritage Center, Grant County PUD)
[87]

Discussant

Neller, Angela (Wanapum Heritage Center, Grant County PUD)
[269]

Who's Gonna Know? Resolving Personal Privacy while Respecting Cultural Edicts in Repatriation

Sovereign nations have cultural edicts that they expect of participants when it comes to matters of repatriation. This poster explores paths taken to manage cultural requests of practitioners in the repatriation process. We will provide scenarios experienced by ourselves and how we respectfully implement tribal cultural requests.

Nelson, Ben [305] see Torvinen, Andrea

Nelson, Erin (University of South Alabama), Lindsay Bloch (Tempered Archaeological Services LLC), Neill Wallis (University of Florida) and Ashley Rutkoski (University of Florida)
[279]

Sourcing Pensacola Communities of Practice: NAA of Mississippian Pottery on the Northern Gulf of Mexico Coast

The Pensacola variant of the northern Gulf of Mexico Coast was well connected to interior Mississippian groups, yet Pensacola lifeways do not fit broader patterns of subsistence, settlement, and political organization commonly thought of as hallmarks of Mississippian societies. Throughout the Pensacola culture area, people created hybrid cultures by adopting some Mississippian traits while retaining much of their existing regional lifestyles. Pensacola sites and assemblages are therefore quite diverse. We seek to better understand the social relationships that underlie patterns in the distribution of material culture at these sites. How connected were Pensacola communities with one another, with the monumental site of Bottle Creek, and with other Mississippian groups? We have employed neutron activation analysis (NAA) of Pensacola pottery across the northern Gulf Coast to provide direct evidence for the movement of people and ceramic vessels across the lower Southeast from ca. AD 1150–1700. The ability to identify geographic sources of clays and specific paste recipes allows us to situate potting communities of practice in particular places and to begin untangling the relationships among the people who made and used Pensacola pottery.

Nelson, Katherine [32] see Nowakowski, Lauren

Neme, Gustavo (IDEVEA/CONICET/UTN)
[178]

Chair

Neme, Gustavo (IDEVEA/CONICET/UTN), Adolfo Gil (IDEVEA-CONICET), Eva Peralta (IDEVEA-CONICET) and Fernando Franchetti (IDEVEA-CONICET)
[178]

Unstable Frontiers: Isotopic Model of Agricultural Dispersal in the Subtropical Andes

The south of Mendoza province, Argentina, has been characterized as the southernmost limit of prehispanic agricultural dispersion in South America. This limit, originally defined by the presence of macrobotanical remains, was rediscussed in light of the stable isotope data of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ obtained on collagen and apatite from human remains. These results showed a high diversity in human diets, with strong variability between the different individuals analyzed both at a spatial and temporal scales, especially for the last 2000 years BP. This paper presents the results of the spatial analysis, through the use of geographic information systems, applying interpolation methods (Inverse Distance Weighting). For this, a total of 629 human samples from the Subtropical Andes (central-west Argentina and neighboring areas) were used. We show the temporal evolution of the isotopic patterns in the region by subdividing the sample into three temporal units; pre-2000 years BP, 2000–1000 years BP and post-1000 years BP. The results show significant differences in the consumption of C_4 plants between the different analyzed periods. Besides, there is a growing dependence on the consumption of C_4 resources in some sectors of the analyzed area, interrupted by temporal span of decrease in their consumption.

Neme, Gustavo [107] see Gil, Adolfo

Neptune, Nina [203] see Nash, Jacqueline

Nesbitt, Jason (Tulane University), Bebel Ibarra Asencios (Tulane University), Lars Fehren-Schmitz (University of California, Santa Cruz) and Eden Washburn (University of California, Santa Cruz)
[81]

Cultural Transformations in Conchucos after 500 BC

The decline of the Chavín Interaction Sphere in the mid-first millennium BC was followed by major religious, cultural, and economic changes over a wide region of highland and coastal Peru. In this paper, we discuss these phenomena from the perspective of our ongoing research in the Chavín heartland of Conchucos. Drawing on a large sample of radiocarbon dates we can now track these shifts from a more fine-grained historical perspective. Specifically, we outline evidence for the emergence and changing nature of local expressions of the Recuay archaeological culture. Material culture, architectural, and ancient DNA evidence suggest that at least some of the transformations during this time can be attributed to past population movements.

Nesbitt, Jason [287] see Johnson, Rachel

Nesbitt, Jason [218] see Matadamas-Gomora, Diego

Neubauer, Fernanda (University of California, Los Angeles; University of Wisconsin, Madison)
[87]

Indigenous Archaeology, Memory, and Ethnoarchaeology: A Multivocal Research in Collaboration with the Guarani for Land Repatriation in Brazil

This presentation explores my ethnoarchaeological research on a long-term interdisciplinary project in collaboration with Guarani communities toward Indigenous land repatriation in Brazil and offers a case study of a collaboration designed within the framework of Indigenous archaeological approaches. The project's planning and fieldwork were carried out with the participation of the Guarani, and during the research, their memory, oral traditions, perspectives, and interpretations were incorporated into the reports produced in support of a legal claim to their territory occupied throughout the past 1,000 years. Guarani resilience is presented here through a discussion of their sociopolitical struggle for land and indigenous rights. During fieldwork, the Guarani identified examples of plants (including for medicine), animals, deities, and other

cosmological beings, demonstrating their strong relationships with these sacred landscapes, which are essential to the continuity and maintenance of their Ñandé Rekó (the way of being Guarani). Decolonization is a fundamental aspect of Indigenous archaeology, and I argue that archaeologists can play a socially responsible role at the community level by engaging with descendant communities, by reshaping archaeological theory and practice as scholarly activism, and by recognizing that archaeology speaks not only about the past but also for those people who now embody it.

Neunsinger, Alondra [41] see Greaves, Russell

Neurath, Johannes (INAH)

[79]

Relational Complexity in Mesoamerican Sacrificial Ritual Images

In Mesoamerican religious practice, ritual killings (allosacrifice) and so-called practices of self-sacrifice (autosacrifice) often coexist simultaneously. Therefore, the ethnographic, iconographic, and historical analysis should therefore focus on what may be called the condensation of ritual relations. Discussing materials like contemporary Wixárika ceremonies, late Postclassic Aztec veintena rituals, and scenes of codices, as well as other objects featuring ceremonial iconography, I want to show how Mesoamerican images of sacrifice express the contradictory character of rituals, focusing on moments of maximal tension.

Neusius, Sarah (Professor Emeritus, Indiana University of PA)

[280]

Discussant

Neusius, Sarah [204] see Styles, Bonnie

Neves, Eduardo (University of São Paulo)

[56]

Urbanism without Cities in Ancient Amazonia

The Middle Horizon was a time of political centralization in the Andes. During the same period one sees in the Amazon clear evidence of population growth, settlement nucleation, and landscape transformation, as it is attested by the increase in site size, the production of anthropic soils, construction of earthworks, and the establishment of road networks. Such pattern varied across the basin: whereas in the llanos de Mojos one sees the construction of truly monumental architecture, in the Central Amazon and elsewhere, settlement occupation span was maybe shorter. These cases show that there was a considerable range of forms of urbanism in the Amazon, none of them associated to the development of the state but based on a structural alternation between episodes of political centralization and decentralization as an outcome of the operation of kin-based domestic level economic activities based on the management of abundance.

Neves, Eduardo (University of São Paulo)

[208]

Discussant

Neves, Eduardo [54] see Kater, Thiago

Newell, Savannah (Edward Via College of Osteopathic Medicine) and Krystiana Krupa (University of Illinois, Urbana-Champaign)

[100]

Conceptualizing Consent: The Influence of Legal Language on Postmortem Agency

Across institutions nationally, willed-body (or cadaver donation) programs use language that, although often vague, typically provides some level of detail regarding what exactly donors are consenting to. This poster assesses use and recovery of the collected body in anthropological contexts, framed using the language of modern body donation. In reviewing a sample of willed-body programs, the authors found that 83 of 91 (91%) include language reflecting consent for education and 75 (82%) include language reflecting consent for research. When donating to these programs, education and research use are what the public generally understands they are providing consent for; however, it is still added explicitly to the language of these documents. This poster emphasizes differences in consent requirements between willed-body programs and archaeological collections of human remains. For example, many archaeological collections are used in teaching contexts—similar to modern willed bodies—but these largely require no manner of consent. The differential treatment of contemporary donated bodies and archaeological teaching and research collections will be the primary focus of this presentation, highlighting patterns and disparities in legal language from sources such as statutes and consent agreements.

Newell, Zachary (Oregon State University) and Loren Davis (Oregon State University)
[316]

What's Cooking at Devils Kitchen? Context, Content, and Chronology of an Early Site on the Modern Oregon Coast
Preliminary geoarchaeological investigations at the Devils Kitchen site (35CS9) produced a stratified archaeological record comprised of stone tools, debitage, and fire-cracked rock associated with alluvial deposition occurring between ~11,600 and 1900 ¹⁴C BP (i.e., ~13,470 and 1800 cal BP). The robust Holocene-age portion of this record demonstrates that the site was occupied throughout multiple periods of significant postglacial environmental change. Though most notably, the discovery of lithic artifacts between the position of wood charcoal samples radiocarbon-dated to between 11,000 and 5900 ¹⁴C BP (i.e., 12,700 and 6700 cal BP) seemed to suggest that a late Pleistocene-age occupation of the site was plausible—making it only the second known example in the region. The limited nature of the initial test excavations and augering meant that further work was necessary to increase chronological resolution of the site's lower stratigraphy. This paper reports the results of a multiyear effort to excavate a block of 22 new 1 × 1 m units at the site and presents a robust assay of new radiocarbon dates acquired to complement existing litho- and pedostratigraphic models of the site, providing clarification for the depositional context of the lowermost cultural materials recovered at the Devils Kitchen site.

Newhall, Victoria [128] see VanDerwarker, Amber

Newland, Michael (Alta Archaeological Consultation) and Alex DeGeorgey (Alta Heritage Foundation)
[192]

The Demography of Fire

Over the past seven years, Alta Heritage Foundation (AHF) has responded to nearly a dozen catastrophic fires on the west coast. AHF is a 501(c) nonprofit that works with canine human remains recovery teams to identify cremains, the cremated remains of individuals who were cremated prior to the fire and stored in private residences, and retrieve them for families who lost homes in these fires. During this time, the AHF team has noted patterns in the homes and economic levels of the clients using our services. This paper discusses those differences and outlines the specific role that archaeologists play in assisting the victims of catastrophic fires.

Newlander, Khori (Kutztown University) and Linda Zuniga (Kutztown University)
[41]

Compositional Analysis in Historical Archaeology

Compositional analyses are commonplace in prehistoric archaeology. For example, lithic and pottery analysts regularly use geochemical methods to acquire mineralogical and chemical data that allow them to source

artifacts. The geographic patterning of sourced artifacts provides archaeologists with a rich dataset from which they infer seasonal procurement ranges, acquisition strategies, territorial boundaries, cultural resource preferences, and intergroup interaction, providing fundamental insights into landscape use and sociocultural organization. We contend that compositional analysis holds similar promise for the study of artifacts from historic sites. Here, we employ portable X-ray fluorescence spectrometry (pXRF) to acquire compositional data from pottery, glass bottles, and bricks recovered from Stoddartsville, a nineteenth-century milling village in northeast Pennsylvania. Our analysis of these data provides insight into the burgeoning regional economy, the development of local industries, and consumer agency.

Newlander, Khori [265] see Zuniga, Linda

Newman, Phillip
[333]

The Missihuasca Hypothesis

While it has been established that the Natives of the Mississippian Ideological Interaction Sphere employed a number of magical plants toward entheogenic ends (Barrier 2020; Rafferty 2021; Simon and Parker 2018), e.g., *Nicotiana* spp., *Datura* spp., *Ipomoea* spp., etc., the general consensus has been that the use of N,N-Dimethyltryptamine, in the forms of jurema, ayahuasca, yopo, viho, etc., is limited to certain Indigenous peoples of South America. Based on ethnographic reports, however, there is evidence that the Cherokee in particular may have had access to N,N-DMT via *Gleditsia triacanthos*, or honey-locust—a deciduous tree in the family Fabaceae that contains the compound in its roots and holds a prominent place in Cherokee mythology. Moreover, the presence of β -carbolines in other plants utilized by Native Americans of the Southeast, e.g., *N. rustica*, *Passiflora incarnata*, and possibly *Ilex vomitoria*, suggests that *G. triacanthos* could have been combined with a number of MAO modulating plants, resulting in a concoction chemically similar to the South American tea, ayahuasca.

Newman, Sarah (University of Chicago)
[249]

Animal Architecture: Historicizing Nonhuman Material Culture

As new research continues to reveal the cognitive richness and social complexity of animal lives and as recently developed technologies expand the materials that can serve as traces of the past (as well as the information that can be gleaned from them), the range of activities and actors that can be studied archaeologically and historically extends beyond the human. In this paper, I suggest that archaeologists can adapt methods that have been used to study human prehistory and apply them to illuminate nonhuman animal pasts. Drawing direct comparisons between the material traces of animal lives and the specific kinds of physical remains, archaeological methods, and anthropological theories that have been used to investigate human histories in the absence of texts and living memories, I show how animal architecture—hives, nests, mounds, dams—can be examined over time and space and probed using analogous methods to those employed to excavate and document human buildings and infrastructure.

Newsome, Seth [201] see Neff, Nadia

Newton, Jennifer [69] see Howell, Devon

Ng, Laura (Grinnell College)
[258]

Reclaiming and Activating Chinese American Heritage in Wyoming

The Rock Springs Chinatown in Wyoming was the site of the 1885 Chinese Massacre, where a White mob

murdered 28 Chinese coal miners. Survivors took refuge at the Evanston Chinatown, approximately 100 miles west. While archaeological research led by Dudley Gardner has been ongoing at both Chinatowns for over three decades, Gardner and his team have also worked on heritage-related projects such as memorials, collaborating on the reconstruction of the Evanston Chinese temple, and putting together a National Historic Landmark nomination for both the Rock Springs and Evanston Chinatowns. Recently, archaeologists have begun identifying descendants to begin a new phase of collaborative research. Preliminary discussions with descendants indicate that they are interested in using the archaeological sites as staging grounds for reunions, commemorative events, art, and activism in order to (1) highlight the 1885 Chinese massacre, which has been silenced in local and national histories; (2) facilitate the commemoration of transnational family histories that often post-date the massacre; and (3) provide an opportunity for descendants to speak about their own experiences with racism. Archaeological sites such as the Wyoming Chinatowns are important venues for descendants to reclaim their histories and for the wider public to participate in social change.

Ngoc Han, Le [289] see Macrae, Scott

Ni, Jenny (Columbia University), Severin Fowles (Barnard College) and Richard Mermejo (Picuris Pueblo)

[84]

The Race Track: A Chacoan Legacy in the Northern Rio Grande

A portion of a retired race track was excavated in 2023 on Picuris tribal lands within the right-of-way of a planned infrastructure project. Just one of Picuris's many race tracks, the feature draws our attention to the ongoing heritage of Chacoan "roads" in the northern Rio Grande region, while also underscoring the local spiritual significance of the race track's destination—Jicarita Peak—located 14 miles to the southeast. This paper covers the background of the race track in the history and landscape of Picuris Pueblo, the results of our recent test excavations, and the significance of the race track as an ancestral connection to the Chacoan world.

Nials, Fred (Desert Archaeology Inc.) and Winston Hurst (Independent)

[310]

Ancient Puebloan Agricultural Landscape Features, Northern San Juan Area

The recent lidar-aided discovery of more than 60 mi² (155 km²) of Ancestral Puebloan agricultural features, roads, and ritual features in the Northern San Juan area brings into question many of our preconceived notions about prehistoric lifeways. Agricultural features, the focus of this discussion, are consistent in location, morphology, engineering design, and apparent function across a 110-mile-long (177 km) expanse of Utah, Colorado, and New Mexico. These features, now almost imperceptible from the ground, include more than 1,060 miles (1,700 km) of constructed individual berms (ridges) thought to have originally measured about 1 m high, 2 m wide, and 100–200 m in length, and to represent more than four million human-days of labor. The ridges have a consistent orientation, believed to facilitate snow harvesting. Ridges do not follow contours but tend to be roughly perpendicular to regional land-surface slopes of 0°–3°, and parallel to local surface slopes of 0°–3°. This design maximizes runoff harvesting and minimizes erosion in sandy soils, and ridges are seldom present in steeper terrains. Scarcity of erosional features indicate successful design and runoff manipulation. The extent of apparent "fields," coupled with Chacoan great houses and roads may have implications for food production in areas further south.

Nials, Fred [236] see Britton, Emma

Nials, Fred [96] see Hurst, Winston

Nic Aoidh, Nóra (University College Dublin)

[318]

Interspecies Relationships in Nordic Bronze Age Iconography

Despite roads and railways around the world being based on the widths of their bodies, nonhuman animals are now systematically excluded from much of modern Western life. In some of the most human-populated areas, animals are forbidden from indoor spaces and from many private outdoor spaces. However, these carefully curated and restrictive relationships we participate in today almost certainly did not exist in the past. Examples of Bronze Age rock art and other artifacts suggest a plethora of different potential interpretations of how interspecies relationships were formed and performed, represented, and upheld in prehistory. The wide range of “naturalistic” and imagined animal motifs on Nordic Bronze Age rock art panels, and their precise placement in rock and in the landscape, challenge classically anthropocentric and capitalistic narratives of interspecies relationships. They also serve to contest standard naturalist categorizations as well as modern Western ontologies. This project will demonstrate the value of posthumanist, experiential, and integrative landscape frameworks through case studies of rock art panels and artifacts with animal iconography from the Nordic Bronze Age. In doing so, it will contest rigid, naturalistic, and classically human-focused perspectives, moving toward a more holistic, posthumanist approach of understanding interspecies interactions in the past.

Nicholas, Linda [86] see Golitko, Mark

Nichols, Andrew (Mississippi State University), Anna Osterholtz (Mississippi State University) and D. Shane Miller (Mississippi State University)

[211]

Application of Metric Sex Estimation Standards at Tell Abraq: A Study of the Humerus

Estimating sex in commingled assemblages may have an increased reliance on metric methods. These metric methods are often based on known collections that differ in geographical location and historical time period from the commingled collections to which they may be applied. In this presentation, we detail the testing of three different metric standards for the estimation of sex based on the humerus from the Tell Abraq tomb (ca. 2200–2100 BCE, United Arab Emirates). The purpose of this study was to see which metric standard most closely represented the sex ratios already previously established using morphological assessments of the pelvis. Measurements used for all four standards were taken multiple times. Of these, the epicondylar breadth, condylar breadth, and vertical diameter of the head had the highest representation. The number of estimated males and females were then compared by method. Overall, the Spradley and Jantz US standard most closely corresponded to the roughly 60% male, 40% female ratio established by the morphological assessment of the pelvis (despite being very disparate in time and space from Tell Abraq). This study shows the impact of population specificity on metric standards developed for the estimation of sex based on isolated elements.

Nicholson, Christopher (Center for Digital Antiquity [tDAR])

[63]

Discussant

Nicholson, Christopher [173] see Collazzi, Charlene

Nicholson, Christopher [198] see McCray, Brian

Nicholson, Christopher [323] see Schwendler, Rebecca

Nicholson, Christopher [305] see Torvinen, Andrea

Nicolas Lorenzo, Dennis (Pedro Ruiz Gallo University)

[161]

Morro de Eten and the Social Interactions of the Middle and Late Formative Period in Northern Peru

Morro de Eten is located on the coast of the Lambayeque valley, and due to the characteristics of its cultural material, it has long been involved in the Cupisnique–Chavín dichotomy. In this presentation, it is not

discussed whether Morro de Eten corresponds to a Cupisnique or Chavín settlement. Instead, from the identification of the shared cultural attributes of the pottery, the paper explores the modes, scales, and frequencies of interaction to establish a similarity index. On the basis of this index, it is stated that since there is no homogeneity in the distribution of the set of features identified in Morro de Eten, the data reflect the agency and intensity of complex mechanisms of social interaction that developed in local, regional, and interregional scales between 900 and 550 BC.

Nicolas Lorenzo, Dennis [161] see Martini, Sarah

Nicolay, Scott (University of California, Merced)
[221]

The Intensification of Mimbres Cave Ritual: Empirical Phenomenon or Disciplinary Artifact?

Over two dozen cave shrines are known from the Mimbres Mogollon region, more than have been reported from any other cultural region in the US Southwest and Northwest Mexico (SW/NW). Despite some variation, the archaeological record of these sites is remarkably consistent and readily allows for their identification as shrines due to the presence of an ethnographically recognizable complex of offertory materials that includes prayer sticks (*pahos*), painted wood objects (*tablitas*), and cane cigarettes. It remains difficult to determine, however, whether this phenomenon represents a stronger interest in cave ritual among the Mimbres or is simply the product of more thorough cave survey in that region, especially the work of Hattie and C. Burton Cosgrove in the 1920s and Walter Hough in 1905. Neighboring regions show related patterns but fewer cave shrines. This paper synthesizes a wide range of data in order to place Mimbres cave ritual in its spatial and temporal context. Available data, including the few available ¹⁴C dates, supports the conclusion that cave ritual did indeed reach unprecedented levels during the Mimbres Classic (ca. 1000–1130 CE). Available evidence suggests that this intensification was driven simultaneously by population expansion, religious reformation, and environmental factors.

Nicolay, Scott [197] see Cobb, Emilie

Niculescu, Tatiana (Alexandria Archaeology) and Eleanor Breen (Alexandria Archaeology)
[89]

“A Sense of Stewardship”: Assessing the Archives of Alexandria Archaeology

In 1961, the city of Alexandria, Virginia financed one of the first municipally funded archaeological projects in the country, laying the groundwork for today’s Alexandria Archaeology which curates three million artifacts from over 250 sites. Since the 1960s, the program has witnessed urban renewal, the birth of the CRM industry, vast technological advancements in computing and conservation, and multiple interpretive shifts that gradually refocused our research onto the lives of ordinary and marginalized people who have lived, worked, and passed through Alexandria. This paper examines the roots of Alexandria Archaeology, traces its biography over the last six decades, and attempts to grapple with the effects of these “site formation processes” on the current state of archaeological collections. We will assess some of the current challenges and opportunities the program faces that must be understood within the historical, economic, and technological contexts that have shaped the program and its associated archives.

Nielsen, Axel (CONICET Argentina)
[185]

Discussant

Nielsen, Jesper (University of Copenhagen), Christophe Helmke (University of Copenhagen), Claudia Alvarado (University of Copenhagen) and Silvia Garza (Proyecto Arqueológico Xochicalco)

[214]

Material Proxies and Stylistic Indicators: On the Adoption of Foreign Forms of Governance at Xochicalco, Morelos, Mexico

With the collapse of Teotihuacan, the central Mexican highlands were plunged into a period of social restructuring, known as the Epiclassic (AD 650–950). This period saw the emergence of independent city-states, rising in the wake of a highly centralized hegemonic form of governance. There are few empirically informed theoretical models or heuristic approaches to explain the advent of Epiclassic sociopolitical structure(s). Yet, based on the material evidence found at Xochicalco we are now forced to acknowledge that the bulk points to emulations of elite Maya material culture and forms of symbolic expression. Therefore, far from the superficial stylistic similarities, as long debated among art historians, we now need to consider the presence of eccentrics, censers, architecture and associated sculptures, representations of mythological entities and deities, and most important of all, depictions of idealized rulers, as deriving from contemporaneous canons of Maya art and material culture. This strong resonance of the ideological realm of the Maya speaks of the well-informed translation of foreign forms of governance to a central Mexican setting. We thereby propose that the rulers of Xochicalco modeled their forms of governance on those that existed at the time, in the monarchical city-states of the Maya, in the east.

Nielsen, Jesper (University of Copenhagen)

[292]

Discussant

Nielsen-Grimm, Glenna

[39]

Discussant

Niespolo, Elizabeth [55] see Dewar, Genevieve

Nieves-Colón, Maria [47] see Contreras-Sieck, Miguel

Nieves-Colón, Maria [127] see Stone, Jessica

Nilsson Stutz, Liv [93] see Alonso Eguiluz, Monica

Niño, Juan Camilo [220] see Herrera, Marta

Nisch, Emily (Michigan State University)

[140]

Use-Wear Analysis on Shell Artifacts

Shells feature prominently in prehistoric archaeological assemblages in the southeastern United States. However, serrated freshwater mussel shells, of the type found at a Late Woodland site in North Carolina and other area sites, have not been studied and their use been unknown. These freshwater mussel shells were given a serrated edge, with evenly spaced teeth along all edges of the shell, excluding the hinge. Denticulated shells do not show up in historic accounts from later sites, nor is there any clear contextual information about their use. Use-wear analysis was used to attempt to identify what these serrated shells were used for. Due to minimal previous research on shell use-wear, use-wear analysis methodologies were

developed for this project and tested on a sample of serrated shells from the Late Woodland site. Data resulting from use-wear analysis was used to identify possible uses for the serrated shells, and one of these uses was provisionally explored through exploratory archaeology process. Initial experiments showed that the shells may have been used on plant material, which provides a window into indigenous plant uses that have otherwise been lost due to taphonomic processes on site.

Nishida, Megan

[285]

Shaped, Molded, and Buried: Differential Access to Ceramics in Early Bronze Age I Bab adh-Dhra', Jordan

New ways of looking at old evidence can help develop a better understanding of the relationship between early urbanism and social differentiation in the ancient Near East. In the Southern Levant during the Early Bronze Age I (ca. 3700–3000 BCE), the site of Bab adh-Dhra' was a center for mortuary activities for EBA communities. Bab adh-Dhra' is an important case study for archaeologists interested in the earliest expressions of differentiation and social inequality during the rise of urbanism in the Early Bronze Age. The sustained use of shaft tombs and later development of charnel houses by villagers across generations illustrates major changes in how people dealt with their dead and defined social relations. In this current study thousands of ceramic vessels from over 100 EB I tombs were statistically analyzed using size, form, function, ware patterns, fabric, and manufacture to compare the differential access to ceramic funerary assemblages across tombs. This research contributes to the wider discussion of how and why differentiation existed, how individuals asserted their own agency in the face of long-standing mortuary tradition, and how differentiation and social inequality developed in the Southern Levant during the Early Bronze Age.

Nishihara, Kazuyo (Nara National Research Institute for Cultural Properties)

[186]

Weaving with the Seasons: A Case Study of Jomon Baskets and Resource Management in Neolithic Japan

Evidence that basket weavers in the Neolithic Japanese archipelago had weaving techniques and knowledge of their adjacent climate and environment has been found in archaeological artifacts dating from approximately 8,000 to 2,300 years ago (Early to Late Jomon period) across the Japanese archipelago. Fewer than 1,000 basketry pieces, including fragments, have been excavated from archaeological sites, and they show continuity and change in weaving techniques that continues through the modern period. Earlier archaeobotanical studies of Jomon baskets show that these weavers used various materials from the nearby environment and seemed to know the best season for gathering and processing materials. In an affluent hunter-gatherer foraging lifestyle, material choice and availability in quality and quantity with a reasonable amount of time for crafting are necessary. In this study, I use ethnographic accounts from the 1960s through 2020s from basket weavers in nearby areas and archaeological observations regarding excavated baskets from (1) the Higashimyo site, Saga, and (2) the Korekawa site, Iwate. By comparing ethnographic accounts that hold TEK (Traditional Ecological Knowledge), this study seeks to understand the reasons for choice of basket material based on the subsistence calendar. Through the lens of weaving, the study shows how weavers interact with their environment.

Nishimura, Yoko (Gettysburg College)

[169]

Chair

Nishimura, Yoko (Gettysburg College)

[169]

Centralized Urban Planning and Economic Segregation: A Case Study Based on Wealth Inequality at Tell Asmar and Khafajah in Mesopotamia

This paper explores a possible correlation between central planning and economic segregation in ancient urbanized cities. A preplanned and constructed urban residential area may have fostered an aggregate of

inhabitants who had similar traits, such as ethnicity, class, wealth, occupation, and religion. Different clusters of people may be discerned between districts, neighborhoods, or particular sections within a neighborhood at the intrasite level. It is postulated that a top-down process designs a living quarter as a local defensive measure to an external military threat, which results in bringing together residents with similar economic traits. A case study to examine this correlation is drawn from the third millennium BC cities of Tell Asmar and Khafajah in central Mesopotamia. Excavations exposed dozens of houses within residential neighborhoods, and one of the occupation areas at Khafajah shows a well-planned project that took place around 2400–2300 BC. Through the use of the Lorenz curve and Gini index, the houses built by the centralized project exhibit a higher degree of economic similarity than those of other house levels at these sites. This correlation should be further tested with larger data from other ancient cities across the globe.

Nissen, Zachary (Northwestern University)

[10]

Discussant

Nissen, Zachary (Northwestern University)

[327]

Reuse, Rubble, and Relations to Place at Ancient Maya Cities

This paper traces histories of reused stone and space at ancient Maya cities. Space/Place theorists have documented the ways that physical spaces have layers of meaning tied to their history of use. In the Maya area, archaeologists have documented myriad ways in which Maya individuals have engaged with and related to reused materials/places prior to European colonialism. These studies have shown how interacting with materials from the past is an important part of ritual practices that crafted a sense of community and validated ancestral connections to place. At the same time, contemporary activities relating to the reuse of ancient Maya sites and materials are undervalued and, in some cases, stigmatized. Through a focus on reuse, this paper reflects on the broader ways individuals and communities can engage with and forge connections to archaeological spaces. I argue that by tracing histories of reuse and contextualizing their significance and meaning, archaeologists can better frame and engage with the meanings that are generated in contexts of reuse, which has implications for community engagement and notions of heritage.

Noack, Karoline [193] see Gabelmann, Olga

Noack Myers, Kelsey [253] see Kansa, Eric

Noack Myers, Kelsey [173] see Wells, Joshua

Noah, Lucy

[266]

Adzes in Focus: A 2D vs. 3D Geometric Morphometric Analysis of Dalton Artifacts

Geometric morphometrics (GM) is a method of digitizing objects in a way that controls for variables, such as size and scale so that the shape of objects can be compared to determine differences and similarities. This method has become increasingly abundant in archaeological investigations of lithic tool assemblages. In studies regarding prehistoric peoples in the Americas, GM has predominately been used for 2D analyses of lithic points. It is generally agreed upon that data from a 2D GM analysis can be extremely beneficial in identifying morphological trends in lithic assemblages that can have a variety of cultural implications. However, there have not been many studies looking at the benefits of including a third dimension in these analyses. This research project uses 2D and 3D GM data collected from large lithic tools, Dalton adzes, in order to investigate the differences in statistical outcomes when using these two methods. The results of this study will help quantify the loss of shape data that occurs when conducting 2D GM analyses on large 3D lithic artifacts.

Nobayashi, Atsushi [186] see Yu, Pei-Lin

Noe, Sarah (UC Santa Barbara), Randy Haas (University of Wyoming) and Mark Aldenderfer (UC Merced)

[249]

From Hunting to Herding in the Lake Titicaca Basin: A Preliminary Investigation of Faunal Assemblages, 9.0–3.5 ka
As the sole large-bodied animal domesticate in South America, camelids constituted a central component in Andean socioeconomies and were pivotal for the expansion of early complex societies. The timing and nature of domestication, as well as the subsequent spread of husbandry practices, remains a fundamental question in Andean archaeology. This paper examines faunal remains from the Lake Titicaca Basin, which is a suspected domestication center. The faunal assemblages from three well-dated sites, including Wilamaya Patjxa (9.0–6.5 ka), Soro Mik'aya Patjxa (8.0–6.5 ka), and Jiskairumoko (5.0–3.5 ka), show that the highland hunting practices consistently targeted wild camelids and Andean deer and a virtual absence of small mammals, birds, and fish. We further observe that the prevalence of camelids relative to deer increased over the period of investigation, consistent with a hypothesis of intensified exploitation and incipient management of camelid herds by at least 6.5 ka in the Titicaca Basin.

Noe, Sarah (UC Santa Barbara)

[249]

Chair

Noelli, Francisco (University of Lisbon)

[134]

Past as Future in Times of Colonialism: Women's Agroforestry Knowledge and Practices across Generations
This paper explores the Indigenous agroforestry communities from São Paulo and Paraná during the colonial period in Brazil. It highlights Tupiniquim women's practices, encompassing their roles in transmitting knowledge about plant cultivation, fostering food sovereignty, and preserving their language. Using botanical, archaeological, and ethnographic sources, it examines the role of Tupiniquim women in the context of colonialism and their cultural preservation—one of the agendas of today's communities. These women's collaborative actions are a permanent bridge that connects the past and future as a continuing fight for civil rights.

Nolan, Kevin (Applied Anthropology Laboratories)

[65]

Discussant

Norman, Neil (College of William and Mary)

[250]

Keep Your Eyes on the Practices and Process: Ann Stahl's Impact on the Archaeology of the Bight of Benin and Beyond
Through a series of publications, boots on the ground fieldwork, and dynamic community collaboration, Ann Stahl set the pace for an engaged archaeology that centered historical processes, daily practices, scale, and dimensions of time. Although these theoretical innovations have been adopted broadly, they took flight in the West African region when Stahl focused her research. This paper explores Stahl's impact on the archaeology of the Bight of Benin Region in West Africa, as well as the diasporic places where people from this region were forcibly relocated.

Norman, Scotti (Warren Wilson College)

[2]

Less Writing, More Eating: Using Experiential Learning to Promote Engagement at a Small Liberal Arts College

Warren Wilson College is a small school in Asheville, North Carolina that integrates work, study, and community service through the lens of experiential learning. In this talk, I will discuss some of the pedagogical choices in my Archaeology of Food and Feasting course that promoted student engagement apart from traditional written assignments. More specifically, using the over 1,000-acre campus, farm, and garden, I show how the course explored social dynamics of food in the past through plant identification, foraging, zooarchaeology, ceramic analysis, and above all feasting. These hands-on experiences culminated in a “final exam” that encouraged students to obtain ingredients either from the Bounty and Soul food bank or from foraging and create a meal together as a class. As food and feasting are aspects of shared human experience both through time and space, the subject is ideal for building and sustaining a communal classroom centered on empathy and concern for an equitable and sustainable future.

Norman, Scotti (Warren Wilson College)

[208]

Discussant

Norton, Holly (History Colorado) and Heather Shotten (Fort Lewis College)

[150]

Reconciling with the Past and Present: Efforts at Colorado Federal Indian Schools

Between 1880 and 1920, Colorado hosted nine institutions that focused on the assimilation of Native youth, including day schools, on-reservation boarding schools, and off-reservation boarding schools. One institution in particular, Fort Lewis Indian Boarding School, became a state college with the intent to serve the Native population. Today Fort Lewis College, side by side with the State of Colorado, is grappling with its deep history and its roots in the federal Indian education system. This paper will discuss the steps the state has taken to understand that history and collaborate with impacted communities to approach resolution and reconciliation.

Norton, Lauren [230] see Woodfill, Brent

Norwood, Tate [172] see Van Keuren, Scott

Nottaway, Cezin [202] see Lamothe, Francis

Novelo Pérez, María (Universidad Autónoma de Yucatán), Daniela González Chablé (Universidad Autónoma de Yucatán) and Lilia Fernández Souza (Universidad Autónoma de Yucatán)

[83]

Maya Ritual Beverages: Unveiling the Ingredients for an Ancient Alcoholic Offering

Balché is a ritual beverage elaborated with honey and tree bark that, during many centuries, has been fundamental for Maya religious rituals in Yucatán, as documented in precolumbian codices, historical sources, and ethnographic research. Some information at the Madrid Codex indicates that honey and/or balché may have been kept in pottery jars. Although Spanish religious authorities prohibited and persecuted its elaboration and consumption during the colony, Maya ritual specialists continued with its preparation, and balché is used to this day for several ancestral and new ceremonies. The aim of this paper is to offer the results of archaeometric experiments performed with honeys of different Yucatecan origins as well as with balché prepared both by contemporary Maya ritual specialists and by us in the Laboratory of Chemical and Microscopic Analyses of the Autonomous University of Yucatán. Our goal is to approximate chemical and paleobotanic evidence from the honey and the balché by enriching modern pottery fragments for their subsequent residue analyses, which allow us to propose the possibility of its archaeological identification. In

this way, we want to contribute to the analyses of archaeological artifacts and contexts in the discussion about honey and ritual in ancient Mayan beverages.

Novotny, Anna (Texas Tech University)

[25]

Cycles of Time and Body Partibility at the Ancient Maya Site of Chan Chich, Belize

The archaeological record of the ancient Maya reveals many examples of the living returning to human interments to exhume skeletal elements, expose the elements to fire or smoke, or to paint them with red pigment. At the ancient Maya city of Chan Chich, located in northwest Belize, skeletal remains dating to the Preclassic period (413–235 BC) show evidence of manipulation and possibly burning; charcoal from the burning event dates to AD 600–800, or the Late Classic period. Bones of the feet and lower body are articulated, suggesting a primary interment with at least one reentry event many centuries later. The partibility of ancient Maya bodies is well established as one facet of ancestor veneration (Geller 2012). I follow Geller and Strathern (2005) in considering the body as indicative of the collective rather than the individual. One interpretation of ancient Maya ancestral contexts is that this individual was chosen to venerate for actions in life or their relation to the still living, but many centuries of time between events requires additional reflection. In this contribution, the timing of the initial burial and timing of subsequent reentry are contextualized within the history of the site to understand the act of veneration.

Novotny, Anna [295] see Mink, Kirsten

Novotny, Anna [34] see Novotny, Claire

Novotny, Claire (Kenyon College), E. Christian Wells (University of South Florida) and Anna Novotny (Texas Tech University)

[34]

Adversaries and Ancestors: A Comparison of Two Skull Caches from Northwest Honduras

At La Sierra, in the Naco Valley, the crania of five individuals were discovered in a niche at the front of a Late Classic (AD 600–950) house. Each skull was sitting on its own plate surrounded by obsidian blades. Sixteen km to the southwest, at the site of El Coyote, an ossuary containing two interment episodes of at least 14 individuals dating to the Terminal Classic (AD 950–1100) period was discovered next to a staircase leading to the main plaza. The skulls were placed near the outer edges of the chamber and the disarticulated postcranial remains piled in the center. Comparing these examples contributes to our understanding of the Mesoamerican tradition of manipulating human skeletal remains in order to affect sociopolitical processes among the living. We argue that human skeletal material—skulls in particular—are part of a wider relational process. The perceived world and everything it contains is animated by the same essence. Maintaining a connection to this essence is a crucial facet of Mesoamerican ritual practice. In order to interpret the two deposits, we draw on their archaeological contexts, ethnographic and ethnohistoric evidence, and iconography to help us conceptualize the materialization of ritual practices involving the human body.

Nowakowski, Lauren (University of Texas, San Antonio), M. Kathryn Brown (University of Texas, San Antonio), Katherine Nelson and Jason Yaeger (University of Texas, San Antonio)

[32]

Learning Together: A Specialized Residence for Acolytes at Group C, Xunantunich

Scholars have sought to identify ancient Maya spaces where specialized knowledge was transferred and acquired. Several historic accounts, including that of Bishop de Landa's in Yucatán, mention specialized residences for youths while they were being schooled. Analogous to boarding schools, housing exclusively for acolytes creates a focused environment for learning and for creating sodalities. Archaeologists have identified complexes that likely included living spaces for youths in training at several sites including Tikal, Copan, and Xunantunich. In this paper, we present findings from Xunantunich's Group C that support this interpretation. Our investigations have targeted two range structures that face each other across a courtyard. These vaulted

structures, C-2 and C-3, had rooms with high benches, each with an incised patolli board. The doorways were broad and faced outward across the courtyard. They lack the interior doorways and division of space typical of residential buildings. Additionally, they are associated with a relatively large sweat bath likely built to hold a larger group, as well as a modest patio group that we believe housed servants and attendants. Finally, the buildings are associated with large open spaces that are formally demarcated, which we suggest were used for drills, perhaps including rituals, processions, and combat training.

Nowell, April (University of Victoria)

[139]

Chair

Nowell, April (University of Victoria), Jennifer French (University of Liverpool) and Mary Lewis (University of Reading)

[246]

The Secret Lives of Paleolithic Teens: Puberty Assessment of Adolescents in the European Upper Paleolithic

In recent years, archaeologists have made real progress in understanding the lived lives of Paleolithic children, but adolescents from this period remain understudied. In this study, we use maturational markers developed on the skeletons of medieval English children to determine puberty status of 10 Upper Paleolithic adolescents from sites in Russia, the Czech Republic, Monaco, Italy, and France. With these data we address the following 3 questions: (1) Did these individuals look like children or emerging adults when they died and did that affect the way they were treated in death? (2) Was adolescence recognized as a special time in the life course of an individual in the Upper Paleolithic? (3) At what age was a child considered to be an adult in the Upper Paleolithic? Did this vary by sex, geographic region, and/or time period? We combine our puberty data with paleopathological assessments, aDNA information on sex and genetic relatedness, ethnographic data, material culture (grave goods), and other behavioral evidence to develop for the first time a picture of the lives of European Upper Paleolithic teens.

Nowell, April [139] see Ames, Christopher

Nuevo Delaunay, Amalia (Centro de Investigación en Ecosistemas de la Patagonia)

[77]

Chair

Nuevo Delaunay, Amalia (Centro de Investigación en Ecosistemas de la Patagonia), Javiera Letelier Cosmelli (Centro de Investigación en Ecosistemas de la Patagonia) and Carlos Castillo Levicoy (Corporación Memoria Austral-Aysen Vernacular)

[77]

Historical Archaeology as a Device for Heritage Protection in West Patagonia

The relatively recent colonization of West Patagonia is perceived as a main component of cultural heritage by the communities of the Aisén region (Chile). Understanding colonial life makes sense in the construction of the narrative of local and regional identities. Hence, historical archaeology can play a key role in education and protection of material heritage, especially in a context where there is a limited written record.

Furthermore, historical archaeology has the potential for unveiling underrepresented processes and/or individual stories. We developed a research project for studying the variability of the rural record of household and ranch occupation of the recent past of Aisén, one which is very rich and diverse. The record ranges from large estancias to ephemeral sites across a wide variety of environments, including the coast, forests, and the steppe. We present a multilayered strategy aimed at studying the record at site and basin scales, material culture analysis, 3D recording of architectural heritage, and outreach. Experience thus far shows a high engagement of communities, making historical archaeology an appropriate device for heritage protection in West Patagonia.

Nuevo Delaunay, Amalia [77] see Espinosa, Silvana
 Nuevo Delaunay, Amalia [126] see Méndez, César
 Nuevo Delaunay, Amalia [77] see Moreno-Meynard, Paulo

Nuñez, Bryan [124] see Marcone, Giancarlo

Nuñez, Jose (Universidad Nacional Mayor de San Marcos) and Alejandro Chu (Universidad Nacional Mayor de San Marcos)

[193]

Manifestaciones del poder Inka en la Cordillera Oriental (Usicayos, Puno, Peru)

Se ha conceptualizado que la relación entre un imperio arcaico y una sociedad conquistada ondula entre dos polos: el hegemónico y el territorial. Ambos sistemas conllevan distintas estrategias, las cuales son aplicadas según los deseos del imperio, pero también atendiendo a las características locales, sean geográficas, políticas y sociales. Los inkas no son ajenos a estas dinámicas, y habrían empleado diversas estrategias con la finalidad de extender y consolidar su poder fuera del núcleo; transformando política y económicamente a las sociedades conquistadas. El presente trabajo busca rastrear las manifestaciones materiales de dichas estrategias. Para ello, toma el caso del valle de Usicayos, ubicado en la provincia de Carabaya. Este valle habría desempeñado un papel importante por su posición estratégica como corredor natural entre el Altiplano peruano y las Yungas Orientales. En base a los hallazgos, se plantea que los Inkas consolidaron su presencia en el valle a través de la reocupación y ampliación de un asentamiento local, así como por medio de la construcción de un sitio estatal nuevo. También se habría ampliado y estandarizado el sistema vial. Por otro lado, las consecuencias de la política inka se refleja en el abandono de la mayor parte de sitios previos.

Núñez, Lautaro [306] see De Souza, Patricio

Nunez-Cortes, Yajaira (Smithsonian Tropical Research Institute)

[118]

Discussant

[157]

Chair

Nunez-Cortes, Yajaira (Smithsonian Tropical Research Institute), Ashley Sharpe (Smithsonian Tropical Research Institute), Nicole Smith-Guzmán (Smithsonian Tropical Research Institute) and Geissel Vargas (Museo Nacional de Costa Rica)

[222]

Diet and Mobility in the Diverse Geographies of the Lower Central American Land Bridge

Richard Cooke dedicated his career to the study of past human groups on the lower Central American land bridge (southern Nicaragua to northern Colombia) and their diversification in the tropical landscapes of the region. He has argued that the diverse geography of the landscape favored both endemism and diversity in human societies, who at the end of the sixteenth century spoke diverse, yet related, Chibchan and Chocoan languages. Moreover, approximately seven centuries before the European contact the region witnessed the arrival of Mesoamerican migrant populations from the north. The long precolumbian history of this complex scenario is accompanied by variation in the interplay between human populations and their surrounding environments. Thus, tracing the diversity of subsistence practices and residential mobility through time and space is critical to understand how these groups colonized tropical habitats and thrived to become complex societies. To assess these issues, we present preliminary data on a multi-isotope program (carbon, nitrogen, strontium, and oxygen) for populations from archaeological sites in Panama and Costa Rica during the last 2,000 years of precolumbian history.

Núñez Ocampo, Rubén [230] see Shiratori, Yuko

Nurkin, Gary

[300]

Discussant

Nusbaum, Katharine [267] see Ohman, Alexis

Nutor, Kofi (Texas A&M University, College Station)

[250]

Archaeology, Indigenous Archiving Practices, and the African Past: Researching the History of Atlantic Slavery in Peki, Ghana

This paper discusses the creative use of indigenous and conventional archives and archaeological data in unearthing the history of Atlantic slavery in Peki. This frontier Ewe community in present-day Ghana led the pan-Ewe Krepi state out of Akwamu and Asante hegemony, thereby altering the power dynamics of the nineteenth-century post-abolition Atlantic economy in the Gold Coast. Researching this complex history from an interdisciplinary perspective that draws data from egalitarian archival sources underscores the fact that non-literate societies have very sophisticated ways of preserving their histories and memories or that there are more “documents” or “archives” than we think—cultural landscapes, ritual practices, and monuments. I argue that African historical archaeologists should pay attention to the dialectics between indigenous archiving practices, oral traditions, and textual archives of the recent African past. Bridging egalitarian and conventional archives in African historical archaeologies is valuable for producing counternarratives that confront biases toward the Western documentary record and how they have been reified through ideological models of social evolution. This approach, however, requires cultural sensitivity and a commitment to collaborative community-engaged research that entails learning with Indigenous communities rather than only learning about them—essential tenets long championed in Ghanaian/West African archaeology by Professor Ann Stahl.

Nyárádi, Zsolt [68] see Arroyo, Valerie

Nyárádi, Zsolt [68] see McGrath, Katie

Nyárádi, Zsolt [68] see Silva Carvalho, Carlos

Nyers, Alexander [306] see Davis, Loren

Nyers, Alexander [197] see Recklies, Laura

Nymark, Andreas (Harvard University), Amir Beshkani (Histoire Naturelle de l'Homme Préhistorique) and Peter Bye-Jensen (Cultural Museum ArchaeoLab, Vejle Museums)

[93]

High-Altitude Adaptation in the Middle Paleolithic of the Zagros Mountains, Iran: A View from Houmian

Intensification of fieldwork in the Zagros Mountains over the past two decades have provided crucial new insights into the region, revealing a much more complex patchwork of MP lithic industrial variability than hitherto appreciated. We present a series of new case studies on the high-altitude MP rockshelter of Houmian in the Iranian Zagros. Posited to be one of the oldest, highest-lying MP sites in southwest Asia, contextualizing a series of new findings offers both site-specific and regional implications for cultural change and variability. This paper will focus on a reanalysis of the lithic and pollen records, making the claim for multi-seasonal occupation at ca. 2,000 m asl. A lithic techno-functional study identifies separate—and non-Mousterian MP—technological strategies of production within different layers of the stratigraphy. A use-wear

study reveals evidence of specific resources targeted by MP hominins in the surrounding landscape. We highlight a successful approach for extracting high-quality lithic use-wear data from museum collections using state-of-the-art portable equipment. These findings serve to both confirm and refute previous behavioral and environmental interpretations surrounding MP land-use in the Zagros. The resulting implications contribute to a reappraisal of the MP of the Zagros as a dynamic region of hominin complexity.

Nystrom, Ken (State University of New York, New Paltz), Joseph Diamond (State University of New York, New Paltz) and Tyrone Wilson (Harambee Inc.)

[7]

Owned in Life, No Longer Owned in Death: Remembering the Ancestors at the Pine Street African Burial Ground
Established in 1750 on the outskirts of Kingston, NY, the Pine Street African Burial Ground was consumed in the process of urban expansion by the mid-1850s and now sits in the backyard of a residential neighborhood. Despite the importance of Kingston in the history of New York, relatively little is known about the African American experience in the city. In this presentation, we will briefly summarize what is currently known regarding the early history of the burial ground before highlighting recent efforts to preserve the site, including the purchase and stewardship of the land by Harambee, a Kingston-based, African American-run community group. Harambee has implemented a multiyear, multifaceted plan for the Burial Ground including development of an on-site community center and museum, design and creation of a public memorial, and a program of educational outreach pertaining to the history and centrality of African Americans in Kingston and the Hudson Valley more broadly. We will then discuss how bioarchaeological research connects and contributes to these overarching goals of Harambee, presenting results based on two seasons of excavation.

Oas, Sarah (Archaeology Southwest)

[149]

Chair

Oas, Sarah (Archaeology Southwest) and R. J. Sinensky (Crow Canyon Archaeological Center)

[149]

The Black Burned Bits of Prehistory: A Celebration of Dr. Karen R. Adams

This paper provides a brief overview of Karen Adams's career and contributions, with a special emphasis on her extensive research and her legacy as a mentor to decades of junior scholars and budding archaeobotanists. Dr. Adams's investigations into the long history of people-plant relationships in the US Southwest and beyond exemplify the power of a mix of fieldwork, particularly building robust comparative collections, experimental archaeology, rigorous and innovative analytical approaches, and dedication to preserving accessible data. Pursuing an independent scholarly path, Dr. Adams's professional contributions and work are marked by collaborative and creative approaches, often combining Indigenous histories and traditions with archaeobotany and other plant sciences. Through a presentation that highlights a rich research career spanning the Pleistocene to the present day in publications as varied as children's books to journal articles, and hundreds of reports, we explore important themes in Dr. Adams's career that has improved our understanding of the past and the ways that people and plants have shaped one another for millennia.

Oas, Sarah [305] see Fladd, Samantha

Oas, Sarah [149] see Sinensky, R. J.

Oberreiter, Victoria [247] see Gelabert, Pere

Obie, Michael [130] see Conolly, James

Obluski, Artur [95] see Stark, Robert

O'Brien, Haley [304] see Prentiss, Anna

O'Brien, Matthew [219] see Mackie, Madeline

O'Brien, Meagan [207] see O'Donnell, Tristan

O'Brien Butler, Ciara (Cardiff University), Katie Faillace (Cardiff University) and Richard Madgwick (Cardiff University)
[334]

Complementing and Complicating: Integrating Isotopic and Phenotypic Evidence at the Early Medieval Cemetery of Five Mile Lane

Isotopic and phenotypic methods are frequently employed in studies of migration and population affinity in the past; however, they are rarely integrated due to differences in scales. This paper presents a case study for the complementary use of multi-isotope ($^{87}\text{Sr}/^{86}\text{Sr}$, $\delta^{18}\text{O}$, $\delta^{34}\text{S}$, $\delta^{13}\text{C}$, and $\delta^{15}\text{N}$) analysis and odontometric analysis to address questions of mobility and kinship. The site of Five Mile Lane (SE Wales) contained 378 inhumations cut into a probable Late Bronze Age burial mound, with burials spanning the period ca. AD 400–1200. Multi-isotope analysis on 60 individuals demonstrated regional and long-distance mobility throughout the population, situating this community within wider networks by identifying likely migrants from elsewhere in Britain and perhaps beyond. However, analysis of phenotypic affinity suggested that individuals of diverse origin were not necessarily biological outliers, and some may have descendants buried within the cemetery. By combining both types of data, it was possible to reveal more about the lived experiences of these individuals, contributing to questions of kin-based networks of mobility with new forms of evidence. The integration of isotopic and phenotypic data in this case study enabled greater specificity in the interpretation of the site than was possible using singular or independent methods.

O'Carroll, Finola [22] see Scott, Rachel

Ocasio, Efrain (University of Miami)
[92]

Thirty-Eight Years Later: An Evaluation of the Dissemination of Public Knowledge Concerning the 1622 Nuestra Señora de Atocha Shipwreck Site in the Florida Keys.

Named the most valuable shipwreck to be recovered, the Nuestra Señora de Atocha was part of the Spanish Tierra Firme fleet bound for Spain in 1622 until a severe hurricane sank the vessel off the Florida Keys. In 1985, treasure hunter Mel Fisher and a crew of salvage divers uncovered the main hull of the Atocha along with a vast number of valuables. The struggles between underwater archaeology and the salvage industry lie in the differing priorities, preservation techniques, knowledge production, and overall approaches to shipwreck exploration and recovery. This study explores how much information recovered from the Atocha made it into the public domain via publishing, media coverage, etc., in comparison to dissemination standards set by professional underwater archaeologists in the academic and private sectors.

Ochatoma Cabrera, Jose, Pedro Neciosup (PIA Paisajes Arqueológicos de Pañamarca), Evan Tamez-Galvan (Denver Museum of Nature & Science) and Tim Trombley (Columbia University)

[13]

Archaeological Illustration and Imaging: Documentation of Pañamarca's Archaeological Project

For decades now, with the appearance of analogue photography, and more recently of digital technologies, a debate has arisen about the functionality, advantage/disadvantage between different archaeological recording techniques—considering that their main objective is to capture as accurately as possible the archaeological heritage that is being uncovered. The mural paintings of Pañamarca create the imperative need to reproduce archaeological and artistic illustrations on 2D planes—because of the complexity of the traces and colors—which is complemented by a package of technological tools that gives us the possibility of accessing 3D models. In this presentation we present an overview of traditional and digital archaeological illustration in the history of research at Pañamarca with special emphasis on the archaeological fieldwork of 2022 and 2023. Finally, we present and preliminarily contrast the results of 2D and 3D recording, each with different recording techniques and approaches, but finally complementing each other to fulfill data gaps that allow for a deeper understanding.

Ochatoma Cabrera, Jose [13] see Koons, Michele

Ochatoma Cabrera, Jose [13] see Ortiz Zevallos, Jessica

Ochatoma Cabrera, Jose [13] see Trever, Lisa

Ochoa Castillo, Patricia and Felipe Ramírez (INAH)

[240]

Historia de los trabajos y las colecciones cerámicas de Cuicuilco con presencia Chupícuaro

La presencia de ciertos elementos de la tradición Chupícuaro en varios sitios de la Cuenca de México, durante el Preclásico tardío y terminal, es apreciada principalmente en la cerámica y las figurillas. Entre éstos ejemplos, destaca Cuicuilco, ya que desde sus primeras excavaciones se observaron rasgos que lo asociaron con esta tradición. Por lo anterior, en esta exposición se hace un breve recorrido de los trabajos arqueológicos de este sitio donde se destacan vasijas cerámicas y figurillas de esta tradición y la posible relación y amplitud geográfica de la presencia Chupícuaro en la Cuenca de México.

Ochoa-Winemiller, Virginia (New Jersey City University)

[157]

Artisan Communities, Regional Interaction, and Identity in Eastern Honduras

This paper discusses the role that two distinctive artisan communities from eastern Honduras, El Chichicaste and Dos Quebradas, played as producers of pottery and obsidian blades within local and interregional exchange networks. Analysis of pottery, obsidian, and settlement patterns from both sites disputes the common perception of this region as “intermediate,” less developed, and marginal. Instead, eastern Honduras was a dynamic region, interacting, exchanging, and selectively internalizing knowledge and practices with groups in Mesoamerica and the Isthmo-Colombian-Chibchan area. Data suggests that eastern Honduras was distinctive, with significant time depth (occupation dated from the Late Preclassic to Early Postclassic times), cultural continuum, and internal developments. The evidence indicates interregional and perhaps long-distance exchange of prestige goods and symbolic material culture via land and riverine networks. These foreign encounters and products, accessible mostly to elite rulers and merchants trading at nearby and long-distance markets, resulted in practices attempting to roughly replicate and reinterpret the array of cultural artifacts and ideology for local consumption. The outcome of these interactions resulted on a hybrid identity that incorporated local and foreign cultural features acquired, construed, and exchanged with neighboring groups.

O'Connor, Sue [217] see Fairbairn, Andrew

Odom, Brian [173] see Herndon, Kelsey

O'Donnell, Sarah

[97]

Discussant

O'Donnell, Tristan and Meagan O'Brien

[207]

The Efficacy of 3D Photogrammetric Models in the Documentation and Reconstruction of Dismantled Historic Stone Walls in Southern New England

Stone walls serve as indicators of both contemporary and historic property boundaries as well as significant features such as farms, roadways, and internal property routes. The northeastern United States, particularly New England, boasts an estimated 193,121 km (120,000 mi) of stone walls. In cultural resource management (CRM), it is not uncommon for culturally significant stone walls to be documented, dismantled, and restored. While 3D photogrammetry has been increasingly used in CRM, archaeologists continue to rely heavily on the use of hand-drawn maps, illustrations, and 2D photography. During work conducted by POWER Engineers on a transmission corridor in southern New England, several historic stone walls were documented using both traditional archaeological means and 3D photogrammetry. The research presented compares the cost, quality, and time to completion between three different methods of archaeological data collection and presentation, including the extrapolation of figures from traditional field drawings on graph paper, 3D photogrammetric modeling, and drawings rendered from 2D photographs when recording historic stone walls.

O'Donnell, Tristan [207] see Haynes, Tanner

O'Donoghue, Jason

[253]

Can We Predict Archaeological Site Location? Should We?

Archaeological predictive models, whether formal or informal, are commonly used on compliance-driven projects, but their efficacy is rarely tested. Too often, we assume that models are “good” or “successful” when more sites are discovered in “high-probability” than in “low-probability” zones. In Florida, state guidelines for cultural resource management professionals mandate the use of a predictive model and stipulate specific testing requirements for each probability zone. Dave Anderson pioneered the use of site file data to answer “Big Picture” questions and his work at Fort Polk set a high bar for developing multiscale predictive models from broad survey data. As an MA student, Dave taught me not to shy away from large, messy datasets, but always to ask pointed questions and be wary of biases and logical fallacies. In other words, Dave taught me “how to think.” In this paper, I draw inspiration from Dave to test the efficacy of the Florida predictive model using data from the Florida Master Site File and other state-wide datasets. In doing so, I question the efficacy and appropriateness of predictive modeling as a regulatory tool and provide an alternative framework for consideration.

Oertle, Annette [289] see Utting, Benjamin

Oestigaard, Terje (Uppsala University)

[25]

Medical Cannibalism in Scandinavian Folklore: Practical Uses and Religious Rationalities

Although cannibalism is a contested theme in anthropology, there is one area and era that has received little attention: Scandinavian folklore in the nineteenth and early twentieth centuries. The widely documented

practices represent a particular type of cannibalism that has been called medical cannibalism. Dead bodies were the most powerful medicine for any kind of disease and illness, and the fresher the corpse, the better. Warm blood from beheadings and executions were precious and popular medicines, together with, among other medicines, what was called “corpse-water,” “human-water,” “human-fat,” or “priest-fat,” which was melted or boiled human flesh or brain. The medicines worked in secular settings, but the strength and powers came from the ancestors and spirits. All diseases were spiritual attacks of bad spirits and therefore the powers to combat these malevolent attacks were found among the dead. Still, it was a religious system of mortality without morality, because murderers were more powerful than ordinary people. A murderer had the powers of at least two persons in his body and hence this power could be used for the betterment of others. The rationality of this particular type of cannibalism and practical magic will be presented and discussed in this presentation.

Oga, April [236] see Britton, Emma

Ogawa, Timothée (British School at Athens), Noémi Müller (British School at Athens), Haris Procopiou (University Paris I Panthéon-Sorbonne), Sevasti Triantaphyllou (Aristotle University of Thessaloniki) and Evangelia Kiriati (British School at Athens)

[113]

Cooking in Clay: A Diachronic Study of Potting and Cooking Traditions in Bronze Age Toumba Thessaloniki, Northern Greece

Toumba Thessaloniki, situated on the coastal plain of the Thermaikos Gulf in northern Greece, was one of the largest settlements in Central Macedonia during the Bronze Age. The prolonged occupation of the site spanning from the Middle Bronze Age through the Classical period resulted in the formation of an artificial mound of approximately 1 ha. The findings obtained in decades of excavation provides fertile ground to gain insight into past communities. This paper presents a diachronic examination of the cooking ware from Middle to Late Bronze Age Toumba. Examining an extensive assemblage comprising thousands of sherds, we employ an integrated approach that combines the study of the *chaîne opératoire* and morpho-functional characteristics, including macro- and microscopic analysis (thin-section petrography) and elemental analysis (WD-XRF), to investigate fabric, manufacturing techniques, and associated cooking habits. The objective is to identify communities of practice and reconstruct the organization of the local cooking ware production. Additionally, the evolution of “batterie de cuisine” will be examined as a means to explore changes in cooking practices over time. Ultimately, the findings will be discussed within the context of the intense mobility and cultural interactions during the Bronze Age with the Balkans and Southern and Central Aegean.

Ogborne, Jenn (Historic St. Mary's City) and Erin Crawford (Historic St. Mary's City)

[89]

Under One Roof: The Physical and Digital Reorganization of the Historic St. Mary's City Archaeological Collections

The archaeological collections at Historic St. Mary's City span some 50 years of continuous research resulting in approximately 6.5 million artifacts, thousands of pages of field records, paper catalogues, and related documentation. In 2016 the entire collection was moved from multiple storage locations into one single repository at the museum. Over the past few years, staff in the Research and Collections department have been working toward strategies to rehouse, reorganize, and redocument the collections' materials where needed, revealing the various storage and data taphonomies of our collections. Recently, we have been focusing on digitizing legacy collections related to current projects and increasing accessibility both within the museum and public availability. These projects build on previous work and are centralizing information into a single cloud-based database. Some aspects of these efforts include new digital data standards and policies, condition assessments, storage procedures, and updating data and metadata about artifacts in the collection. This paper will discuss these strategies, their development, and our future goals for increasing accessibility to the collection.

Ogden, Brigid (University of Tennessee, Knoxville), Elizabeth Tarulis (University of Tennessee, Knoxville) and Taylor Bowden-Gray (University of Tennessee, Knoxville)**[319]***Straying from the Flock: A Stable Isotope Analysis of a Sheep Membrane Condom from Colonial Maryland*

This paper presents a stable isotope analysis of a membrane condom from the colonial Oxon Hill Manor Site (18PR175) in Maryland to shed light on the geographic origins of the artifact. Previous analysis using zooarchaeology by mass spectrometry (ZooMS) identified the condom as having been made from a sheep. The addition of stable carbon and nitrogen analysis of the condom's tissue allows for a tentative interpretation of whether the artifact was manufactured locally in Maryland or produced and imported from abroad. Our results provide a starting point for future research into the trade and manufacture of prophylactic devices in the eighteenth-century Atlantic World and their role in shaping broader colonial attitudes toward sexual health and hygiene.

O'Grady, Patrick and Thomas Stafford (Stafford Research LLC)**[94]***Utilizing Tooth Enamel from Extinct Megafauna to Date the Earliest Occupations at Rimrock Draw Rockshelter, Harney County, Oregon USA*

Camelops sp. and *Bison* spp. tooth enamel fragments recovered from late Pleistocene alluvial deposits at Rimrock Draw Rockshelter (35HA3855) in the northern Great Basin region of Oregon were used for AMS ¹⁴C dating. Five specimens yielded 11 AMS ¹⁴C dates ranging from 11,190 ± 25 RCYBP (13,170–13,080 cal BP [95% CI]) to 15,150 ± 40 RCYBP (18,650–18,260 cal BP [95% CI]). The youngest enamel dates are coeval with Clovis occupations elsewhere in North America; the older specimens predate Clovis by 5,000 years or more. Our results indicate that the geochemistry of basalt terrains in the northern Great Basin enables accurate ¹⁴C dating of enamel bioapatite (carbonate hydroxyapatite) from extinct megafauna tooth enamel from valley alluvium otherwise devoid of bone, wood, and charcoal. The sample preparation process is likely effective in other noncarbonate (basalt) terrains and expands the range of geochronology options for archaeologists needing reliable dates on nonconventional fossil material. The presentation will focus on two themes: a survey of the site characteristics and context and the recent advances made in AMS ¹⁴C chemistry as embodied in this research.

Ogundiran, Akin (Northwestern University)**[56]***The Oyo Empire, ca. 1570–1840: The Art of Being a Compositional State*

Yoruba sovereign states matured about the eleventh century in ideology, symbols of authority, and organizational structure. Governed by a system of monarchy comprising the divine king/palace officials and nonroyal lords, theirs was a political arrangement that placed the king as first among equals with the nonroyal lords who represented the corporate branches (*ilé*) of the political collective—the state (*ilú*). Those corporate units collectively granted the king the authority to rule. Each of these political actors—the king and the nonroyal lords—possessed ritual power and other assets that made the state an interdependent and compositional entity. This arrangement has confounded many theorists of state formation, who have placed the Yoruba states in the categories of segmentary or poorly centralized states. Moving beyond evolutionary typology, this paper seeks to contribute to the debates on state formation processes by focusing on how the Oyo Empire was constituted in the late sixteenth century and maintained from the seventeenth through the early nineteenth centuries, as well as the materiality of citizenship and corporate identity in the empire. Yet, power was diffuse, nested, and networked; a multipolar system evolved with generative constituent units that were simultaneously competitive and collaborative, thereby creating a compositional state.

Ogundiran, Akin (Northwestern University)**[250]***Discussant***[250]***Chair***Ohman, Alexis (NAVFAC Atlantic), Katharine Nusbaum (NAVFAC Atlantic) and Bruce Larson (NAVFAC Atlantic)****[267]***The US Navy and Cultural Resources Overseas*

NAVFAC Atlantic (LANT) is a government agency within the Department of Defense (DoD) that acts as a quasi-headquarters providing support both within the United States and overseas. As a Navy engineering facility, accounting for environmental concerns in the planning process also requires cultural resources assessments. LANT archaeologists are the DoD's only subject matter experts that provide cultural resources support for installations in Europe, Africa, and the Middle East. This poster will present two case studies from key installations overseas. Naval Station Rota in Spain contains features and artifacts from the Paleolithic, Neolithic, Roman period through the twentieth century. In the Horn of Africa, Naval Expeditionary Base Camp Lemonnier and Air Force Base Chabelley have yielded data from the Early Stone Age through World War II. Recent work collaborating with Army Civil Affairs has further facilitated connections with present-day communities in the area. Presentation of this work in an academic setting will highlight the role of the Navy as stewards of the host nations' cultural heritage located on military installations.

Ojeda, Jaime [158] see Torres, Jimena

Okech, Malkia (African Digital Heritage)**[47]***Skills For Culture: A Methodology for Community-Oriented Digital Archaeology Projects*

African Digital Heritage (ADH) is a Nairobi-based nonprofit organization working to encourage a more critical, holistic, and knowledge-based approach to digital solutions within African heritage. Through this, we hope to cement the place of African culture in an era of rapidly changing technologies and endless frontiers. Our focus areas are digitization, innovation, research, and capacity building. This poster will present our pedagogical framework for immersive digital projects that work with archaeological data and the communities that inhabit these cultural landscapes. Our emerging curriculum is based on "Skills for Culture." "Skills for Culture" is a series of educational programs specially curated over the past four years for cultural heritage practitioners working at community level. It is informed by workshops, research, and evaluation and provides a step-by-step guide for practitioners looking to improve their programs, with insights from fellow community-based cultural heritage experts. While ADH is based in Kenya, we firmly believe that our methodology holds broader applicability for archaeological projects endeavoring to incorporate innovative technologies in a conscientious manner. Our poster presentation seeks to foster a meaningful dialogue with fellow presenters, offering an opportunity for knowledge exchange and mutual enrichment.

O'Keeffe, Amy (Trinity College Dublin, University of Dublin)**[115]***No Country for Old Crones: Exploring the Presence of Grandmothers in the Ancient Greek Archaeological Record*

In scholarship, there has been a past tendency to ignore and obfuscate mortal mothers; this also extends to the mothers who live to see their grandchildren. While there has been a sentiment in the past that motherhood is invisible in the archaeological record, there has been very little consideration given to the presence and roles of grandmothers in ancient Greek society. In looking beyond the nuclear family paradigm, it is possible to appreciate the importance of extended family in the role of childcare and support for new

mothers. By exploring a variety of evidence types, it is clear to see the presence and position of grandmothers in the public sphere. In this paper, the artistic representations of grandmothers will be explored, and the troubling stereotype of the “evil mother-in-law” will be discussed and challenged.

Okita, Junichiro [42] see Iizuka, Fumie

Okumura, Mercedes (University of São Paulo, Brazil)

[3]

Chair

Okumura, Mercedes (University of São Paulo, Brazil) and Thomas Kohatsu (University of São Paulo, Brazil)

[3]

Biodistance Studies of Riverine Shell-Mound Builders from Ribeira de Iguape Valley (São Paulo and Paraná, Brazil)

Biodistance studies (craniometrics and aDNA) have been very useful tools to unravel the biological diversity of human populations in the past. In this abstract, we present biodistance analyses based on cranial measurements in order to further understand the relationship between hunter-gatherer groups that inhabited the Ribeira de Iguape Valley (São Paulo and Paraná, Brazil) and other Brazilian groups. These populations from Ribeira do Iguape are associated with the building of riverine shell mounds, using terrestrial gastropod shells during the Holocene. Our results point to a great morphological diversity in the Ribeira de Iguape region from the Early to the Late Holocene. The early Holocene individual shows a very distinct cranial morphology when compared to the middle and late Holocene groups, while these later populations show affinities to individuals associated to the middle and late Holocene coastal shell-mound occupation. We discuss these results, including new data on the paleogenomics of individuals from the Ribeira do Iguape region and the coastal groups.

Okumura, Mercedes [3] see Araujo, Renata

Okumura, Mercedes [3] see Constantino Perez, Glauco

Olafardottir-Hamilton, Olof (Indiana University, IU NAGPRA) and Rebecca Barzilai (Indiana University, IU NAGPRA)

[72]

Tracing Collection Histories for Repatriation: The Fisher Mound Group

Before repatriation, NAGPRA practitioners need to track down all components of a collection to prevent their tribal partners from having to repatriate the same collections multiple times. This involves tracing often labyrinthine collection histories over decades of archaeological research and curation. Collection histories can get complicated when collections are split between multiple institutions due to repeated excavations, decades of distinct curatorial practices, and collaborative research with minimal paperwork for tracking movements of boxes. Split collections and sparse documentation lead to complicated legal and logistical challenges in the NAGPRA process. This poster highlights a case-study on tracing collection histories using Fisher Mound Group as an example. The Fisher Mound Group in Will County, Illinois was excavated by multiple entities, including George Langford from 1926 to 1929, the University of Chicago in 1940–1941, and George Horner of Northwestern Illinois University in the 1940s. Over the years, materials from these excavations were curated at the University of Chicago; Yale University; University of Illinois, Urbana-Champaign; the University of Wisconsin, Milwaukee; and Indiana University. Materials and documentation moved between these institutions, and several others, making Fisher Mound Group a good example of the effort NAGPRA practitioners make to trace collection histories in facilitating best-practice repatriation.

O'Leary, Matthew (Syracuse University)**[311]***Untangling the Collection: French-Associated Ceramic Assemblages at Fort St. Frédéric*

This paper details preliminary analysis of a selection of the R. W. Robbins collection excavated at the Crown Point State Historic Site, New York, in the 1960s. It leverages differential trends in ceramics from mid-eighteenth-century French and British military occupations to better interpret the practices of the French fort community at Fort St. Frédéric. The inherent porosity of early modern frontiers, coupled with dynamic cultural entanglements and the necessities of backwoods subsistence, resulted in French colonial settlements that often included considerable material from non-French sources. This history complicates attempts to culturally associate archaeological layers in contexts with both French and British/American occupations, particularly among collections excavated without contemporary scientific standards for archaeological field methods. This paper focuses on ceramic vessel form and decoration to understand the material legacies of differing taskscapes and socioeconomic tastes between rival European powers within the eighteenth-century world-system.

O'Leary, Michael [263] see Benjamin, Jonathan

Oliva, Martin [25] see Sedlmayr, Jayc

Oliveira, Cristina, Michelle LeFebvre (University of Florida), Isabelle Holland-Lulewicz (Pennsylvania State University), Victor Thompson (University of Georgia) and Michael Buckley (University of Manchester)

[259]*The Historical Ecology of South Florida Shark Diversity and Indigenous Harvest*

Sharks are among the world's most endangered vertebrate taxa, including recent estimates of approximately 71% loss in abundance over the past 50 years due to human impacts. Zooarchaeological baselines of shark diversity, distribution, and exploitation hold great promise for contributing essential historical context in the assessment of contemporary patterns in shark species loss and vulnerability to human-caused extinction. Yet, shark historical ecology receives relatively less archaeological attention compared to ray-finned fishes or marine mammals. The marine and estuarine environments of south Florida are home to an array of shark species and conservation efforts. Here, we focus on shark assemblage data from three ancestral (ca. 2000–300 BP) Indigenous sites spanning south Florida. We review and compare shark taxonomic diversity, cultural contexts of deposition and significance, and local ecologies engaged by Indigenous peoples in the past. Drawing on new ZooMS data, we also consider methodological challenges and advances in the identification of zooarchaeological shark specimens. Ultimately, this review provides a foundation for considering the contribution of zooarchaeological baselines to regional shark historical ecology as well as global perspectives of human-shark interactions through time.

Oliver, José [287] see Lozada Mendieta, Natalia

Oliver, Kalei (University of Texas, San Antonio), Erick Casanova Vásquez (PIARA Peru) and Rebecca Bria (University of Texas, San Antonio)

[284]*Ritual and Domestic Life at Usacorral: Preliminary Investigations and Community-Based Research at a Long-Occupied Community Site in the Northern Callejón de Huaylas, Peru*

Usacorral is a 10 ha mixed-use and long-occupied ceremonial, habitation, and agropastoral complex situated at 3,625 m asl in the north-central highlands of Ancash, Peru. Preliminary fieldwork at Usacorral employed test excavations, mapping, spatial analysis, and community-based research methods to understand the site's occupational history and diversity of social practices. The site's most prominent features include a nucleated

domestic cluster with plaza spaces, animal corrals, tomb chambers called chullpa, and a large rectangular platform (35 × 40 m, ~3.5 m high) with a central circular structure surrounded by other walled spaces. Excavations exposed 8 m² of this platform, and the exposed architectural elements, marine resources, precious stones, sculptural fragments, and ceramic materials indicate ritual activities in the form of offering rare and imported goods in and around the platform's central circular chamber. Survey, surface collection, mapping, and spatial analysis of the architecture beyond this platform reveal a multiuse site where people lived, worshipped, and buried their dead from the Recuay through Akillpo cultural phases (1–1450 CE). This poster presents these data, presents hypotheses for further research, and develops a comprehensive community-based research plan for more extensive investigations at Usacorral.

Oliver, Kristin (Simon Fraser University), Talon Pascal (Simon Fraser University) and Bill Angelbeck (Douglas College)

[35]

A River Runs through It: Recent Analyses of the Multi-sited Lil'wat Village of Lokla in Mount Currie, British Columbia

This paper presents the results of the most recent field season of the Lil'wat Villages Project. In its near decade of work our project has continued to employ a multidisciplinary approach to the archaeology heritage within Lil'wat territory. Our investigations aim to deepen the understandings of their oral histories about their villages and other sites. Over the years, this collaboration has investigated eight villages, most of which are storied places, with events associated from the Time of Transformation to the times of their abandonment. In 2023, investigations were focused on the southern portion of Lokla, a moderately sized pithouse village that is bisected by the Birkenhead River north of Mount Currie, British Columbia. Intact cultural deposits and features were encountered within three house pits, with evidence for three discrete occupation events spanning over 2,500 years. We will discuss how the village is contemporaneously occupied across the Birkenhead River, a split form of community organization.

Olivier, Guilhem (UNAM)

[252]

Victims of Mesoamerican Royal Funerals: Companions of the Dead or Sacrificial Victims?

Since the seminal studies by Alain Testard, there has been debate over the function of victims in royal funerals in different parts of the world. In the case of Mesoamerica, did the wives, servants, dwarves, slaves, and other immolated individuals serve as “companions of the dead,” as “belongings” of the deceased rulers? Or did they participate in the classic sacrificial system defined by Hubert and Mauss, in which the king as “sacrificer” dedicated them to some divine entity? Another possible interpretation is that the divinized sovereign was the recipient of the sacrificial act. In this paper I will examine sixteenth-century sources that describe royal funerals in central Mexico, the Mixteca, and the Maya area to try to answer these questions, particularly analyzing the function of *ixiptla* (deity representative or impersonator) of specific victims and exploring the possible divine status of the dead sovereign.

Olivier, Guilhem [79] see Tiesler, Vera

Olko, Justyna (University of Warsaw)

[59]

Classical Nahuatl or Language of the Aztecs: Historical Appropriation and the Enduring Legacies of (Neo)Colonialism

Nahuatl, often referred to as the “Aztec language,” is one of the languages most widely identified, both in the academy and in public awareness, with prehispanic cultures. In archaeological and historical research, it often receives the name “Classical Nahuatl” and is conceived of as the most original form of the language that was used immediately following the Spanish conquest and was supposedly almost identical to the language of the “Aztecs.” This term, coined through a European lens and inspired by Classical antiquity (with Latin as a model for the first descriptions and grammars of Indigenous languages), assumes the existence of a homogenous reference model, a paradigm that has strongly influenced history, anthropology, and archaeology. Assigned to

the studies of “antiquities” and petrified as an idealized, imaginary, and fictional historical form, Classical Nahuatl was appropriated by the academy and separated from contemporary speakers. Like Latin, Classical Nahuatl is in fact assumed to be a dead language—despite the fact that some 1.5 million people today struggle with the discrimination and challenges associated with keeping their language alive. This paradigm, internalized by Mexican state ideology, attests to an unbridgeable gap between the glorious precolumbian civilizations and the impoverished contemporary Indigenous people.

Ollé, Andreu [162] see Lombao, Diego

Olson, Christopher [154] see Merriman, Ann

Olvey, Sam [176] see Conger, Megan

Omar, Lubna (Binghamton University)

[209]

Unveiling Silenced Narratives: Ethical Codes and the Challenge of Knowledge Dissemination Facing Middle Eastern Archaeologists

This paper delves into the glaring disparities faced by Middle Eastern archaeologists in disseminating their invaluable knowledge about their own heritage, elucidating how prevailing Western-centric ethical codes fail to redress these issues effectively. A profound asymmetry exists, wherein Middle Eastern archaeologists encounter structural violence hindering their ability to contribute on par with their Western counterparts in the field. This predicament is a complex web of impediments stemming from rigid publishing institutions, language barriers, and exclusive networks that perpetuate the marginalization of scholars from the Global South. Highlighting the inadequacies of current ethical codes, this paper underscores the urgent need to reformulate these guidelines, ensuring they are not only culturally inclusive but also cognizant of the unique challenges faced by scholars from underrepresented regions. It suggests solutions such as fostering collaborative partnerships, advocating for linguistic diversity in scholarly discourse, and dismantling the systemic biases ingrained in academic networks. This presentation offers a critical examination of the structural violence faced by Middle Eastern archaeologists, emphasizing the imperative for a more equitable and inclusive approach within the global archaeological community.

O’Neil, Holly (Simon Fraser University), Mark Collard (Simon Fraser University) and Sabrina Higgins (Simon Fraser University)

[264]

Religious Belief and Cooperation: A View from Ancient Greece

Recent work in the interdisciplinary field of the Cognitive Science of Religion has proposed that the in-group cooperation needed for the development of the large, complex human societies that first appeared during the Holocene was fostered by belief in the existence of supernatural beings that monitor humans and punish misbehavior. Two competing hypotheses have been put forward in this context: the “Moralizing High Gods (MHG) Hypothesis” and the “Broad Supernatural Punishment (BSP) Hypothesis.” The MHG Hypothesis contends that belief in one or more moralizing omniscient gods underpinned the development of complex societies, while the BSP Hypothesis proposes that it was fear of supernatural monitoring and punishment by non-MHG supernatural phenomena that fostered the development of sociopolitical complexity, and that MHGs followed rather than preceded the appearance of complex societies. Here, we report preliminary results of a study that is using textual and archaeological evidence for Ancient Greek religious beliefs and practices to test these hypotheses. Emulating a previous study that tested the hypotheses with Viking data (Raffield et al. (2019)), the study seeks to answer two questions: (1) Did the Ancient Greeks perceive themselves subject to supernatural monitoring and punishment? and (2) were the Ancient Greeks’ gods MHGs?

Oosterwijk, Barbara (University of Exeter), Linda Hurcombe (University of Exeter) and José Iriarte (University of Exeter)**[112]***Talk to the Hand: Experimental Research on the Painted Hand Depictions of Cerro Azul, Colombia*

Experimental research holds great potential for answering questions about the materiality of rock art, revealing insights into the practice of creating images and what it can tell us about the people who produced them. At Cerro Azul in Amazonian Colombia, multidisciplinary documentation methods revealed that hand depictions were created using a variety of techniques. Hands were simply printed into the rock surface or stylized and decorated with zigzags, spirals, or lines. This presentation shows an experimental and comparative archaeological study of the materiality of Amazonian rock art using Cerro Azul as a case study. Paint recipes were re-created using a variety of both mineral and plant-based coloring agents, as well as exploring the use of different binders, mixers, and grinding techniques. To further understand the technological means for creating prehistoric rock art, the results were compared with pigment analysis (pXRF) of the Cerro Azul paintings. The outcomes of these methodologies reflect how experimental techniques can enhance our understanding of rock art sites beyond the insights provided by traditional methods.

Oppitz, Gabriela [178] see Bond Reis, Lucas

Ordaz-García, Diana [259] see Rubio-Cisneros, Nadia

Ordóñez, Alejandra [245] see Fregel, Rosa

Ordoñez Alvarez, María [70] see Recuero, Taylor

Oré Menéndez, Gabriela (University of Nevada, Las Vegas)**[172]***Mapping Up and Down: Automatic Mapping of Highland and Coastal Sites Using Multispectral-Based Image Analysis Methods from Aerial Images*

Mapping archaeological sites has become more precise, faster, and cheaper than ever, especially once archaeologists began using unmanned aerial vehicles (UAVs or drones) to capture high-resolution aerial views of archaeological sites. Nevertheless, the next step, manually tracing structures and archaeological features from orthophotos, is still daunting and time-consuming, particularly when the obtrusiveness of the sites, like high reflectance, non-contrasting features, or vegetation cover, prevents us from getting an accurate picture. Using multispectral image classification techniques, like band manipulation and supervised pixel-based classification, the proposed methodology offers a fast and efficient solution to get an initial map of an archaeological site. This poster offers an easy-to-follow workflow to map structures using aerial images. We will compare how this method works in two different sites in Peru: (1) Cerritos, a stone-based prehispanic site located over a steep hill in Huarochirí, and (2) the port city of Islay, an abandoned settlement from the early republican period located on the coast of Arequipa. Additionally, to follow equity principles in research, we share the step-by-step workflow made available through long-term digital repositories and discuss the alternative use of open-source tools.

Orr, Andrew (Argonne National Laboratory), Peregrine Gerard-Little (Argonne National Laboratory) and Konnie Wescott (Argonne National Laboratory)**[270]***A Geographic Information System Approach to Mapping Disturbed Landscapes for Cultural Resources Management: United States Air Force Academy*

Situated on 7,484 ha (18,494 acres) at the foothills of the Rampart Range in Colorado, the main campus of the United States Air Force Academy (USAFA) has experienced human activity across the precolonial, historic, and military eras, as well as natural disturbance from water courses and soil slumping along steep slopes. Both natural and cultural activities have resulted in ground disturbances potentially affecting the integrity of cultural deposits. Using a geographic information system approach, this project delineates land disturbances at USAFA, resulting in a map that illustrates disturbed areas along with the severity of disturbances. Using historical imagery from before, during, and after the construction of USAFA, and high-resolution lidar data, land disturbance features were mapped for the entirety of the campus. A total of 953 disturbance features were mapped manually while 48,959 features were automatically assigned a disturbance value from existing built environment geospatial data. The resulting disturbance map and geospatial data provide a tool for informing USAFA's future planning activities and decision-making, including consideration of impacts on cultural resources. The mapping efforts indicate that undisturbed land accounts for approximately 46% of the installation with remaining land containing some severity of disturbance.

Orsi, Jared [206] see Egan, Rachel

Ortega, Ethan (New Mexico State Land Office), Rachael Lorenzo (New Mexico State Land Office), Anne Curry (New Mexico State Land Office), Carlyn Stewart (New Mexico State Land Office) and Adesbah Foguth (New Mexico State Land Office)
[269]

How It Started vs. How It's Going: The First Year of a Cultural Compliance Rule for New Mexico Trust Land
The New Mexico State Land Office implemented a new Cultural Properties Protection (CPP) Rule on December 1, 2022. This statute mandated changes to a decades-long culture of "you break it, you buy it" regarding damage to cultural properties caused by extractive industry in the state. Implementation resulted in the identification and protection of hundreds of cultural properties. The initial year of cultural compliance requirements also highlighted policy gaps in need of future development. This poster will provide multicultural perspectives on the successes and inadequacies of the CPP Rule, and how it can be a model for other state trust land agencies.

Ortega Muñoz, Allan [21] see Cucina, Andrea

Ortiz, Agustín [218] see Carballo, David

Ortiz, Agustín [218] see Pereira, Gregory

Ortiz Brito, Alberto (University of Kentucky), Arlina Morales Guillen (Universidad Veracruzana) and Daira Hernandez Bellido (Universidad Veracruzana)
[163]

Resultados preliminares de la primera temporada de campo del Proyecto Arqueológico Nestepe/Rancho Cobata (PANCO): Reutilización de monumentos Olmecas durante la transición del Formativo al Clásico
En esta presentación se expondrán los resultados preliminares del Proyecto Arqueológico Nestepe/Cobata (PANCO), relacionados con la reutilización de monumentos olmecas en la región de Los Tuxtlas, durante la transición del periodo Formativo al Clásico. Investigaciones previas sugieren la existencia de fases ocupacionales, correspondientes a dichos periodos, en el contexto arqueológico de las cabezas colosales encontradas en el Grupo Nestepe y Grupo I de Tres Zapotes, así como en el sitio Rancho Cobata. Por ejemplo, Pool determinó que el Grupo I y Nestepe presentan un arreglo arquitectónico fechado para el Formativo Tardío. Por otro lado, fragmentos de cerámica diagnóstica del Clásico fueron hallados en las excavaciones de la cabeza de Cobata. En el 2022, el PANCO realizó excavaciones arqueológicas en Rancho Cobata y en el Grupo I de Tres Zapotes, para refinar la secuencia cronológica de las ocupaciones y los tipos

de actividades asociadas a las cabezas colosales halladas allí. Los datos recabados dan cuenta de cómo, tras el colapso del sistema político olmeca, las cabezas colosales de Tres Zapotes y Rancho Cobata mantuvieron un rol social activo entre los pobladores de la margen occidental de Los Tuxtlas, desde el Formativo Tardío hasta inicios del Clásico Temprano.

Ortiz Mestanza, Miguel Guillermo
[27]

Apropiación, síntesis y representación en la etapa Blanco y Negro de Chavín

La forma final del sitio de Chavín de Huántar se estableció fundamentalmente en la llamada etapa Blanco y Negro definida por Kembel. Hay allí elementos de la arquitectura y del paisaje que son indicios de algún programa de reestructuración social en clave de una renovada jerarquización y la intención de su encubrimiento. En primer lugar tenemos el re-uso de ejes arquitectónicos de la etapa Montículos Separados, usados ahora de manera dependiente. A esto se suma la Plaza Circular como elemento de una extraña novedad, ya que reúne singularidad con cierto arcaísmo debido a su forma, posición y el diseño de su piso. Finalmente, está la presencia de portadas y corredores que indican puntos y líneas de desplazamientos que remarcan la disposición espacial. El resultado fue un ambiente más jerarquizado que expresó una síntesis de la totalidad social basada en la representación de elementos antiguos subordinándolos a un nuevo orden. Esto indica una estrategia donde la apropiación de cierta tradición y capacidades sociales llegó a un nivel especial, y no fue la comunidad en conjunto necesariamente quien la habría determinado. Este proceso pudo incluso ser inevitable.

Ortiz-Ruiz, Soledad [14] see Ibarra, Thania

Ortiz Zevallos, Jessica
[13]

Chair

Ortiz Zevallos, Jessica, Lisa Trever (Columbia University), Jose Ochatoma Cabrera (PIA Paisajes Arqueológicos de Pañamarca), Gabriela De Los Ríos (PIA Paisajes Arqueológicos de Pañamarca) and Michele Koons (Denver Museum of Nature & Science)
[13]

Nuevos hallazgos de la Sala del Imaginario Moche en Pañamarca

Durante las excavaciones realizadas en los años 2022 y 2023 en la Sala Hipóstila, ahora llamada Sala del Imaginario Moche, ubicada en la parte oeste de Pañamarca, se identificaron seis pilares, cinco de ellos, por lo menos, conteniendo representaciones de personajes humanos, animales y mitológicos, los cuales fueron parcialmente vistos en el 2010. En la parte central de este espacio, existen cuatro pilares que se miran entre sí, presentando en sus caras frontales, personajes humanos y zoomorfos que miran o se dirigen hacia el centro, posiblemente para recibir a los actores humanos de altos grados que pudieron ingresar a este edificio. Los citados pilares, agrupados en pares, se encuentran unidos por elementos arquitectónicos como banquetas, un posible trono asociado a una estructura semicircular, también finamente decorados. Cada elemento arquitectónico se encuentra decorado, hasta en más de un momento, quedando clara la intención de la población Moche de Nepeña de demostrar, al menos en el interior de esta Sala, la importancia de la relación y conexión entre la fauna y el mundo social moche.

Ortiz Zevallos, Jessica [13] see Koons, Michele

Ortiz Zevallos, Jessica [13] see Trever, Lisa

Ortman, Scott (CU-Boulder)**[63]***Discussant***[206]***Chair***Ortman, Scott (CU-Boulder) and Kaitlyn Davis (Northern Arizona University)****[206]***Pottery Assemblage Change from the Sixteenth to Nineteenth Centuries in the Pueblo of Pojoaque*

Most studies of colonial period Tewa pottery have focused on complete vessels collected in recent times. Between 2016 and 2019 a team of students and volunteers at the University of Colorado, Boulder, had the opportunity to study excavated potsherd collections from 1952 excavations by Florence Hawley Ellis at two sites within the Pueblo of Pojoaque. The Garcia site contains an assemblage dating from the Spanish contact period through the Pueblo Revolt, roughly 1500–1680; and the Old Pojoaque Dump contains an assemblage dating primarily to the colonial period, from 1706 to about 1900. In this paper I summarize some of the most interesting patterns we observed, including (1) evidence for the in-migration of Tano potters from the Galisteo Basin in the seventeenth century, (2) several changes related to the incorporation of wheat into the economy, and (3) evidence of efforts to mimic the appearance of cast-iron cookware. We also had difficulty establishing internal divisions of the colonial period. These findings provide a basis for comparison of assemblages from contemporary Hispano sites.

Ortman, Scott [323] see Vernon, Kenneth

Ortner, Vaughn (University of Pennsylvania [Alumnus]) and Marie-Claude Boileau (Penn Museum Center for the Analysis of Archaeological Materials)**[166]***The WPA Ceramics Laboratories of the Penn Museum: A Collaborative Legacy*

For decades, scientific approaches have acted as a cornerstone to the processes used by archaeologists to answer questions about past societies. However, just under a century ago, the integration of archaeological science into the wider discipline was undergoing its early steps. One formative series of research projects during this period included those undertaken by the WPA ceramics laboratories (1935–1942), a joint effort between the Works Progress Administration and the University Museum of the University of Pennsylvania (now called the Penn Museum). These efforts employed federally funded workers and the burgeoning methods of ceramic technological analysis to reveal more information on the museum's various ceramic collections than previously possible. Extensive research into the history and legacy of these original museum laboratories reveal their role as a catalyst for the subsequent proliferation and continued development of ceramic analysis techniques, especially that of ceramic petrography, and archaeological science as a whole. Archival evidence proves that the scholarly networks formed by those involved in the WPA projects enabled the principles and methods of ceramic technological analysis to spread throughout the discipline, with the museum laboratories serving as an early nexus and exemplar of the great possibilities held by these new approaches.

Osborn, Jo (University of Exeter), Gaspar Morcote Rios (Universidad Nacional de Colombia), Francisco Javier Aceituno (Universidad de Antioquia) and José Iriarte (University of Exeter)**[36]***The Missing Mammals of Cerro Azul (Guaviare, Colombia): Extreme Fragmentation in Neotropical Zooarchaeological Assemblages*

Ongoing research by the LASTJOURNEY project has investigated multiple archaeological sites located near rock art panels in the Serranía La Lindosa, Colombia, to explore human-environmental interactions during the Late Pleistocene / Early Holocene transition. Due to severe taphonomic conditions in the Colombian Amazon, only one of these sites, Cerro Azul, has produced zooarchaeological materials. Preliminary analysis of this assemblage identified the presence of fish, reptiles, and small mammals (Morcote Rios et al 2021).

Curiously absent, however, are many of medium and large mammal species depicted in the painted rock art just meters away. Rather than reflect hunting practices or dietary preferences, it is suggested that absence of these animals is the results of neotropical taphonomic conditions. New analyses of unidentified bone fragments addresses whether the presence of larger mammalian taxa has been obscured by extreme fragmentation and considers the potential implications for future neotropical zooarchaeological research.

Osborn, Jo (University of Exeter)

[299]

Chair

Osborn, Jo [299] see Espino Huaman, Richard

Osorio León, José Francisco [303] see Hutson, Scott

Osorio León, José Francisco [321] see McAvoy, Scott

Ossa, Alanna (SUNY Oswego)

[276]

The Exchange and Consumption of Incensarios in Middle Postclassic Sauce, Veracruz, Mexico

Incensarios or incense burners are ritual items used in a variety of settings, some in households and some in more formal ritual contexts within Mesoamerica. I analyze residential inventories from the center of Sauce and its hinterland to describe the structure of exchange and consumption of incensarios during the Middle Postclassic period (AD 1200–1350) in south-central Veracruz, Mexico. Many of the incense burners in the Gulf lowlands region are large, elaborate specialty items that could have been restricted in exchange and/or only used by larger households. Information about their production and chronology is scanty, but as a household ritual item not commonly considered in economic analyses, any evaluation of incensarios within the context of local exchange and consumption contributes to a better understanding. Results indicate some restriction for incense burners recovered during the Sauce Archaeological Project (SAP). The largest concentrations of incensarios were found near Sauce, which suggests that political elites may have had more access or use of these items. In the hinterlands of Sauce, incense burners are found with household mounds that were larger, potentially more elite residences, consistent with the interpretation of incensarios recovered with politically elite and potentially wealthier households.

Ostahowski, Brian, Jayur Mehta (Florida State University) and Theodore Marks (New Orleans Center for Creative Arts)

[165]

When Is a Living Shoreline Erosion Control Project Suitable to Protect a Coastal Mound Site? Establishing Preliminary Suitability Criteria Based on a Case Study, Adams Bay (16PL8) Mound 1, in Plaquemines Parish, Louisiana

Many archaeologists studying coastal archaeological sites are weighing the costs vs. benefits of implementing erosion control structures to protect sites threatened by sea-level rise and/or land loss. However, little literature is available about the types and applicability of erosion control structures, such as living shorelines, as protection measures for coastal sites as part of an overall conservation plan for the resource. This paper presents criteria for assessing erosion protection measures for coastal earthen mound sites threatened by land loss based on the Adams Bay Site (16PL8), a Plaquemines site located in Plaquemines Parish, Louisiana.

Osterholtz, Anna (Mississippi State University; Cobb Institute of Archaeology)

[143]

Discussant

[211]

Chair

Osterholtz, Anna (Mississippi State University; Cobb Institute of Archaeology) and D. Shane Miller (Mississippi State University; Cobb Institute)

[211]

Identifying Depositional Processes: Statistical Cluster Analysis at Sacred Ridge

The site of Sacred Ridge has the earliest identified Extreme Processing assemblage in the Four Corners region, with over 14,000 fragments of human bone (representing at least 33 individuals) deposited in two pit structures around AD 810. During excavation, over 9,000 point locations were taken with a total station. During analysis, all fragments were examined with the goal of bone identification, estimation of demographic information (age at death, sex), and identification of taphonomic indicators. These fragments were then subjected to a refitting exercise, resulting in a refit rate of approximately 35%. This presentation will examine the depositional patterns of these refits utilizing a Monte Carlo approach to simulate random mixing. We identified four clusters that could be identified as potentially representing depositional actions (such as the deposition of a basket of bone fragments). We quantified within/between cluster refits using Simpson's Diversity index, and we found that refits tend to occur within clusters, particularly for the long bones, suggesting that the body was processed based on element, further supporting the systematic nature of the body processing at Sacred Ridge.

Osterholtz, Anna [211] see Nichols, Andrew

Osterholtz, Anna [211] see Porter, Keri

Ostermann, Melanie-Larissa [282] see McCartin, Madison

Otárola-Castillo, Erik [35] see Knell, Edward

Otárola-Castillo, Erik [50] see Lindsay, Ian

Overfield, Zachary [192] see Dylla, Emily

Overstreet, David [130] see McLeester, Madeleine

Owens, Lawrence [212] see Eeckhout, Peter

Owens, Lawrence [53] see Suarez Gonzalez, Nathalie

Ownby, Mary (Ownby Analytical, LLC) and Marie-Kristin Schröder (German Archaeological Institute, Cairo)

[287]

Nubian Ceramic Traditions on Elephantine Island, Egypt

The southern border of Egypt with Sudan (prehistoric Nubia) was always a culturally fluid area. As archaeological studies of the site of Elephantine Island have illustrated, there are features representing Egyptian and Nubian cultural affiliation. The pottery in particular can be of Nubian or Egyptian tradition suggesting that peoples of both groups might have lived together at the site. To clarify this, petrographic analysis was conducted on 35 sherds of Nubian pottery from Middle Kingdom layers at Elephantine Island. The focus was on fine-ware vessels and cooking pots. The former relates to long-standing fine-ware traditions in Nubia (C-Group and Pan-Grave types) and could reflect trade, while the latter may indicate Nubian populations living in Egypt. The results showed that most of the pottery was probably made in Egypt in the Aswan area. A few fine-ware vessels may have been made in Nubia. This confirms that people making pottery locally in the Nubian tradition were living in southern Egypt at this time.

Owsley, Douglas [311] see Comer, Elizabeth

Oyaneder, Adrian [242] see Garcia, Magdalena

Ozbun, Terry [133] see Sarjeant, Carmen

Pacheco, Ellen (University of Toronto) and Shelby Patrick (University of Toronto)
[318]

A Cross-Cultural Comparison of Man's Best Friend: Insights from Casas Grandes and the North American Arctic
 Human-animal relations are inherently dynamic in nature, and in recent years archaeologists have started to explore alternative approaches to shed light on anomalous patterns that deviate from traditional models of understanding. Archaeologists traditionally assumed that they could account for cultural differences globally by employing Western divisions of nature vs. culture, thing vs. person, and humans vs. animals. Those interested in the study of ontology must recognize that ancient societies may function in radically different conceptual worlds, often informed by exposure to differing environmental conditions. By examining human-dog relations in both the Casas Grandes culture in Northern Mesoamerica and the Thule culture in the North American Arctic, this paper highlights the benefit of cross-cultural comparison in examining how environmental factors affect individual and collective ontological perspectives. We draw on archaeological evidence of excavations from multiple sites in both regions ranging from AD 800 to 1450/1500, as well as ethnographic analogy from historic period Inuit groups. Through a comparison of ontology, we aim to present alternate modes of inquiry that account for differences specifically related to the treatment of dog species and the unique environments they live in.

Pacheco, Ellen [76] see Maciw, Alannagh

Pacheco, Gianella [13] see Sánchez, Blanca

Pacheco Arias, Leobardo (Centro INAH Oaxaca), Andrés Tejero Andrade (Universidad Nacional Autónoma de México), Denisse Argote Espino (Instituto Nacional de Antropología e Historia), Gerardo Cifuentes Nava (Universidad Nacional Autónoma de México) and Martín Cárdenas Soto (Universidad Nacional Autónoma de México)
[252]

Lyobaa Project: Results of Subsoil Geophysical Study in the Ancient Zapotec Monuments of Mitla, Oaxaca
 This paper presents the methodology employed, as well as the results obtained from the geophysical research conducted in the archaeological site of Mitla, Oaxaca, during the 2022 season of the Lyobaa Project. In this project, noninvasive geophysical techniques, such as ground-penetrating radar (GPR), electrical resistivity tomography (ERT), and ambient noise tomography (ANT), were utilized for surface scanning of the Church Group and the Columns Group. With the support of these techniques, it was possible to identify previous construction phases of the site and determine the physical conditions of some of the structures and the soil beneath these structures. The research was conducted with the collaboration of a multidisciplinary team from the National Institute of History and Anthropology (INAH), the National Autonomous University of Mexico (UNAM), and with the financial assistance of ARX Project A.C.

Pacheco Arias, Leobardo [252] see Sánchez Sosa, Uriel

Pacheco Arias, Leobardo [254] see Torres Porras, Alicia

Pacheco-Fores, Sofia (Hamline University)**[11]***Discussant***Pacifico, David (University of Wisconsin, Milwaukee)****[248]***The Casma State Heartland: A Community-Centered Regional Perspective*

This presentation explores the development, apogee, and denouement of the Casma State in the hinterland context of its capital city, El Purgatorio. El Purgatorio developed within a congested countryside populated by ethnically homogenous people who recognized their own north-central coastal identity. In the fourteenth century, the encroachment of the Chimú Empire provoked the consolidation of the Casma heartland into an urbanized landscape. At its core was El Purgatorio, a city that saw massive growth and density increase from AD 1290 to 1405, followed by a rapid exodus and subsequent Chimú-Casma rule in the valley. Recent evidence from Casma State sites around El Purgatorio supports the theory of this unusual urban growth. More generally, the current evidence for the development of El Purgatorio and its hinterland provides reactivated interest in alternative models of urbanism, including that of low- and medium-density urbanism. It raises questions about the knock-on effects of these urban forms with respect to models of state formation including that of the secondary state and the shadow state. Only by examining the smaller settlements and communities that compose and surround urban capitals are we able to get a nuanced and clear picture of social intensification in the ancient world.

Padilla, Eliseo (INAH, MNA) and Karent López Guzmán (Instituto Nacional de Antropología e Historia)**[240]***La colección Chupícuaro del Museo Nacional de Antropología: Conformación e investigaciones*

A finales de la década de 1910 llegaban al Museo Nacional de México los primeros objetos de la cultura Chupícuaro como parte de la colección Guillermo Heredia. Posteriormente en 1926 se integraban aquellos que procedían de las excavaciones de Ramón Mena y Porfirio Aguirre, y durante los años cincuenta el acervo de esta cultura aumentó con el resguardo del material arqueológico que procedía del Salvamento de la Presa Solís; estos episodios marcaron el inicio de la catalogación de uno de los acervos más grandes de esta cultura que tuvo su auge a finales del Preclásico en el valle de Acambaro al sur de Guanajuato. En esta ponencia se aborda la historia, la creación y evolución de esta colección a partir de la implementación de una base de datos realizada con la revisión de cédulas, archivos históricos y datos en las piezas que permiten su manejo e investigación, registro que ha permitido la reconstitución de casi 400 entierros con sus mobiliarios funerarios.

Padilla, Eliseo [240] see López Puértolas, Carlos

Padilla-Iglesias, Cecilia (Institute of Anthropology, University of Zurich) and Robert Bischoff (Arizona State University)**[323]***Using Agent-Based Models to Explore How Behavior Affects Archaeological Networks*

Archaeologists use a wide variety of material culture and methods to construct and analyze networks. Just how these networks relate to past behavior is an open question, as we lack information on the relationship between behavior and material culture in the past. We do not have adequate datasets of people interacting with people alongside corresponding records of the objects involved in the interaction at the scale and duration used in most archaeological networks. One potential solution to this problem is to use computer simulations. Agent-based models allow us to provide virtual agents with simple instructions and then observe the emergent results. Our simulations allow the agents to interact, learn, move around, and make and trade objects. The result is a network of people-to-people interaction and an archaeological record of discarded

artifacts that can be used to create material culture networks as typically done by archaeologists. Since each type of social interaction is tracked, this approach allows us to correlate specific behaviors with specific patterns in different types of material culture networks. Learning, trading, visiting, and communal hunting behaviors all provide varying levels of correlation with the material culture networks.

Pagano, Victoria (Terracon Consultants Inc.)
[332]

A Stratified Past: A Geoarchaeological Perspective of the Sayles Adobe Terrace Site

This paper is a condensed summary of my master's thesis "Stories in the Sand: Excavation and Analysis of The Sayles Adobe Terrace (41VV2239) In Eagle Nest Canyon, Langtry, Texas" (Pagano 2019). It presents an overview of the background, methodologies, analyses, and conclusions of work completed at the Sayles Adobe terrace site excavated in 2016–2017. Sayles Adobe (41VV2239) is a deeply stratified, multicomponent terrace site located in Eagle Nest Canyon (ENC; also known as Mile Canyon) near Langtry, Texas. The terrace sits less than 50 m downstream from previously excavated rockshelter sites, Kelley Cave (41VV164) and Skiles Shelter (41VV165), which are noted for their rock art panels and immense quantities of discarded burned rock. The deep, stratified deposits of Sayles Adobe and 10 radiocarbon dates spanning the Late Paleoindian to Late Prehistoric periods suggest Sayles was occupied at times not documented in the archaeology of the two nearby shelters. Low-velocity flood events in the canyon sealed and preserved Sayles Adobe deposits, often as low-density occupation surfaces.

Pagano, Victoria [43] see Kimbell, Jennifer

Pagano, Victoria [9] see Lohse, Jon

Pagati, Jeff [35] see Reynolds, Sally

Page, Wayne [177] see Wilkes, Margaret (Meg)

Paige, Jonathan (Center for Archaeological Research, University of Texas, San Antonio)
[308]

Discussant

[308]

Chair

Pailes, Matthew (University of Oklahoma)
[75]

Chair

Pailes, Matthew (University of Oklahoma), John Carpenter (INAH Sonora) and Guadalupe Sanchez Miranda (INAH Sonora)
[75]

La Playa in the Broader Early Agricultural Period

This presentation will situate La Playa site within a broader narrative of the development of the Early Agricultural period (EAP). We review evidence for the obvious parallels of technological development that occurred at La Playa and other EAP sites in both Northwest Mexico and the US Southwest. These changes are then placed in an updated reconstruction of the transmission of agricultural lifeways from Mesoamerica to the North American Southwest. We infer environmental changes during the Middle Holocene Climatic Optimum concentrated populations in the more humid uplands and margins of the North American Southwest, including a southern zone where maize cultivation was acquired. Subsequently, viable cultivation

localities were occupied by the spread of proto-southern-Uto-Aztecan who eventually introduced agriculture across the North American Southwest through a combination of migration and diffusion events.

Pain, Elizabeth

[10]

Discussant

Pal Chowdhury, Manasij [334] see Buckley, Michael

Palacios, Horvey (University of Oklahoma), Delaney Cooley (University of Oklahoma) and Bonnie Pitblado (University of Oklahoma)

[254]

Empowering Communities: Democratizing Knowledge Production in Science Communication through The Community Archaeologist

Science communicators are in an unprecedented time of digital innovation and global connectivity that has given rise to accessible and engaging projects, including podcasts, TikToks, apps, and interactive websites. These platforms have demonstrated how the power to create and disseminate narratives can shift from a select few to the collective voices of the many. Nevertheless, science communicators, particularly in archaeology, continue to explore successful methodologies to empower communities, especially those historically marginalized. In this paper, we explore our approach to democratizing knowledge production through our work with *The Community Archaeologist*, a digital science communication magazine dedicated to sharing narratives of history and heritage that reflect Oklahoma's diverse cultural landscape. Throughout its development, our editorial team has prioritized building enduring and diverse collaborations, ensuring representative authorship, fostering independent content creation, and promoting multimodal engagement. We have also worked to reduce barriers that might hinder community participation, such as financial constraints, time limitations, and a lack of writing experience. While our approach is an ongoing endeavor, it is making strides toward a more equitable and inclusive archaeology.

Paladugu, Roshan [145] see Bishop, Jack

Palermo, Aja

[37]

If Threads Could Talk: Listening to Andean Textiles at the Louisiana University Museum of Art

In the mid-1990s, the LSU Museum of Art received a collection of nearly 60 Andean objects as a donation from a private collector. More than half of the items donated are textiles and/or tools used in making textiles, all thought to have come from Peru. Beyond this geographic pointer, little information came with the collection, so the catalogue entries for these items are overwhelmingly sparse. My research, as part of a MA program in anthropology at LSU, began as an effort to better classify these nearly forgotten items and to fill out the catalogue. In this paper, however, I aim to move beyond stylistic and cultural historical classifications by adopting an object biography approach and considering textiles as agents, I explore their multiple lives as they passed through various hands over time. As I try to make the "threads talk," I dwell on their physical manifestations, visualities, and material conditions at various key moments in their past and current lives. More broadly, I use the textile collection as a springboard to investigate the historical intricacies of acts of collecting and the current challenges in studying museum collections.

Paling, Jason (Plymouth State University) and Justin Lowry (SUNY Plattsburgh)**[157]***Overland Travel Routes and Exchange Spheres of Pacific Nicaragua Using Obsidian and Ceramic Data from Chiquilistagua*

The emergence of social complexity often incorporates social, political, and economic inter- and intraregional interactions. In this paper we examine the emerging social spheres and exchange networks that developed during the Tempisque period (500 BC–AD 300) among small prehistoric agrarian hamlets near Lake Managua. Geochemical analysis of ceramic and obsidian artifacts, in conjunction with GIS predictive modeling, presents possible overland travel routes and exchange spheres, and we then discuss the role these networks had in lower Central America.

Palka, Joel (Arizona State University)**[86]***Return to Aztlan: Aztec Pachuca Green Obsidian in Maya Sites at Mensabak, Chiapas, Mexico*

Archaeology at Mensabak, Chiapas, Mexico, recovered large amounts of green obsidian from mines at Pachuca, Hidalgo, which were managed by Mexica-Aztecs in Late Postclassic times (ca. 1300–1520 CE). Excavations in coeval Maya habitation sites at Mensabak recovered obsidian sourced with XRF equipment at the Field Museum. The analysis indicated that the percentage of Pachuca obsidian ranged between 35% and 50% at various Mensabak sites. Mesoamerican sites with Aztec influence, such as the cacao-growing Soconusco province in Chiapas, typically have high percentages of Pachuca obsidian (35%–65%). Yet, most Late Postclassic sites in Chiapas have only 0%–10% Pachuca obsidian, indicating that Mensabak was important to Aztec people. Mensabak likely drew Aztec traders and pilgrims, as well as Maya merchants interacting with them because of its Aztlan-like island shrine. Importantly, Pachuca obsidian occurs in larger percentages at Mensabak sites with Maya elites, pointing to elite agency in exchange networks and their leadership in ritual and politics.

Palka, Joel (Arizona State University)**[110]***Discussant*

Palka, Joel [230] see Lozada, Josuhé

Palka, Joel [230] see Sanchez Balderas, Adriana

Palma, Martha [185] see Makowski, Krzysztof

Palmer, David (Coastal Carolina University)**[303]***People, Trees, Rice: Consequential Intersections and Complicated Relationships in the Lowcountry*

Multiple dramatic changes in human-forest relationships are manifest in the landscape of the coastal region that spans southern North Carolina to northern Florida known as the Lowcountry. Ecologically diverse bottomland hardwood forests managed by Native Americans since at least the Woodland period were destroyed by settler-colonist newcomers who created a rice monoculture region nearly denuded of trees that was replaced after the Civil War by a mosaic of pine plantations, re-wilding relict rice fields, and residential and tourist construction. All of these landscapes are the result of cultural land-use practices. The managed landscapes that resulted from Native Americans applying generations of Indigenous Knowledge were illegible to European and European-American settler-colonists interested in the commodity value of trees for timber and naval stores, or who saw them as obstacles to lucrative plantation crops like indigo and rice. This latter group radically transformed the landscape through the forced labor of captive Africans and Native Americans. Archaeological evidence from Laurel Hill, Brook Green, and neighboring rice plantations; geospatial data from historic maps and imagery; documentary and oral historical sources; and environmental data examined for this study help us to disentangle the complicated relationships of people and forests in this region.

Palmiotto, Andrea (Indiana University of Pennsylvania) and William Chadwick (Indiana University of Pennsylvania)

[105]

The Importance of Collaboration: Reflections from a World War II Forensic Archaeology Field School

The recovery of past service members from historic military sites is a specialized archaeological niche with substantial forensic influences. It receives distinct notice by governments around the world as they recognize the importance of closure for their nations and families of those Missing in Action. Although this type of archaeology is typically removed from the sociopolitical discussions in precontact North American archaeology, such as decolonization and Indigenous collaboration, the privilege of being part of an academic team from the United States working on foreign soils toward the recovery of American World War II losses offers practitioners a unique place to reflect on these concerns. Notably, we are free to maintain our conflict narratives within our culture but are variably enabled by the communities around the physical recovery sites. The convergence of these perceptions has the potential to generate potent connections even 80 years after the events. When these perspectives are integrated into field school models, students are positioned for powerful multicultural and applied experiences while mastering archaeological field methods. This presentation reflects on the global intersections and narrative constructions inherent in conflict-related archaeology. Two World War II cases from Germany are considered, representing differing levels of community engagement and interest.

Palomares, Teresa (University of Illinois)

[210]

The Evolution of the Two-Room Temple during the Middle Formative in an Interregional Perspective between the Mixteca Alta and the Valley of Oaxaca

The study of the Zapotec temple, its origins and evolution, has significant implications to understanding the social complexity in early societies. This paper follows the proposal of the one-room temple as the origin of the two-room temple, also called Zapotec temple, and exposes its evolution showing the characteristics of those temples identified in San Martín Tilcajete, San José Mogote, and Monte Albán for the early phases of San José, Guadalupe, Rosario, and Monte Albán I-II. In addition, this paper focuses on the one-room temple excavated at Tayata in the Mixteca Alta, pointing out that its function, as well as the rituals and beliefs involved, were similar or shared with those societies from the Valley of Oaxaca. As part of the conclusions, this paper mentions the lack of data about the evolution of the Mixtec temple, having few samples in the region for early times in the Mixteca Alta, such as the one-room temple in Tayata and the temple T of two-rooms in Monte Negro, opening this topic for future consideration and discussion.

Palomares, Teresa [305] see Brennan, Tamira

Palomino Berrocal, Raul, Andrew Billingsley (Texas A&M University), Piotr Bojakowski (Texas A&M University) and Katie Custer Bojakowski (Texas A&M University)

[47]

Preserving the Maritime Cultural Heritage: Digital Recording Applications on the Nineteenth-Century Schooner Equator

The schooner *Equator* was originally built in 1888 in California by the renowned shipwright Matthew Turner and sailed in the South Pacific by Scottish writer Robert Louis Stevenson. After the southern journeys, the ship went through multiple redesigns for different purposes in the west American coast. These events made the ship a unique example and testament of modern maritime history. Because of its cultural and historical relevance, the Port of Everett kept the vessel since the second half of the twentieth century. However, the preservation of the hull is not feasible any longer and the local authorities have decided to disassemble it. Given these circumstances, a salvage archaeological project was executed to record and preserve all the information regarding the architectural features of the *Equator*. To accomplish this task, different methodologies were applied including aerial recording for photogrammetric processing with an unmanned aerial vehicle (UAV) and laser scanning through light detection and ranging (lidar). The poster seeks to present the results obtained from both processes and explore their possible applications in archaeology.

Palonka, Radoslaw, Aaron Wright (Archaeology Southwest) and Katarzyna Ciomek (Jagiellonian University, Kraków)

[156]

Rock Imagery, Cultural Landscapes, and Indigenous Ontologies in the North American Southwest

How we frame the study of rock imagery (i.e., petroglyphs and pictographs) conditions the types of questions we ask, the types of data we employ, and ultimately the types of conclusions we draw. In the North American Southwest, the study of rock imagery has long focused on the images, less so on the rocks, and only rarely on the landscapes in which it exists. This is due largely to a heuristic bias that prioritizes the interpretation or decipherment of the imagery that all too often results in ambiguous or self-proving inferences. New lines of inquiry are looking beyond the mere images to ask how the Southwest's Indigenous communities use rock imagery in social and spiritual dialogues with themselves, neighbors, ancestors, and deities. These approaches generally couple analytical and digital methods and techniques germane to landscape archaeology with ethnographic information on relevant Indigenous ontologies pertaining to land, spirit, being, power, history, and morality—a blending of formal and informed methods. We illustrate examples of this fledgling Southwest focus with case studies from southwestern Colorado and southern Arizona.

Palumbo, Scott (College of Lake County)

[157]

Chibchan Enlightenment

This presentation explores interpretations of past Indigenous political complexity in the Isthmo-Colombian Area. The paper argues that a preoccupation with hierarchy carries unforeseen consequences for the epistemology of the area and proposes a critique; that the various societies of the area deliberately sought to limit coercive power and curtail the rise of despots.

Palus, Emily (US Department of the Interior Museum Program)

[73]

A Federal Framework to Integrate Native American Traditions in the Care of Ancestors and Cultural Property Held in Museum Collections

Federal agencies and repositories holding federal collections have been bound to curation standards often developed without consideration for nontangible values and needs and a legacy of collecting practices intended to preserve the past yet uninformed by the interests and concerns of descendant communities. In 1990, NAGPRA established that tribal communities had rights above those of the collection holder. In 2023, new NAGPRA regulations propose that standards of care defer to Native American community norms. Sharing and ceding authority is an important and meaningful shift in recognizing community expertise within archaeology and museum practice. This paper explores how federal laws and policies can promote—and hinder—incorporation of tribal preferences and methodologies in collections care, within the context of NAGPRA, and beyond. Although tribal viewpoints and preferences are elicited through consultation, recent federal policies on co-stewardship and Indigenous knowledge increasingly incorporate and rely on tribal expertise and practices. Yet honoring cultural customs can conflict with other federal requirements. NAGPRA has helped transform relationships and practices. Reframing duty of care is another pivotal opportunity to collaborate and reform collections management to incorporate culturally appropriate and respectful care for ancestors, cultural items, and other cultural material under our stewardship.

Palus, Emily [305] see Martine, Kristen

Pamplin, Erin (University of Washington), Kathryn Cosman (OHAHP/SUNY Cortland), Brian Cox (OHAHP/University of Washington), Hollis Miller (OHAHP) and Ben Fitzhugh (OHAHP)

[99]

Community Archaeology and the Nuniaq Culture Camp: Undergraduate Perspectives on Practicing Community-Based Archaeology in Old Harbor, Alaska

In July 2023, the Old Harbor Archaeological History Project partnered with the Alutiiq Tribe of Old Harbor and the Old Harbor Alliance to co-facilitate Nuniaq Culture Camp on Sitkalidak Island, Alaska. Thirty-five Alaska Native children and teens from Old Harbor attended a five-day culture camp, in which they participated in archaeological excavation, Alutiiq/Sugpiaq harvesting practices, beadwork, and dance, among other activities. These activities, both new and familiar, were run by Elders, cultural experts, and our group of archaeologists. Here, we reflect on our experience participating in Nuniaq Camp as undergraduate archaeology students. Each day we worked with small groups of youth and community members to excavate a house and midden at the Ing'yuuq site (KOD 114), as well as sift, wet screen, and identify material belongings. We found our positionality as student leaders aided in developing a welcoming learning environment by embracing transparency, humility, and empathy. Teaching was reciprocal; we learned from the children, Elders, and cultural experts about the perspectives, traditions, and day-to-day lives of Sugpiaq people, rooting the archaeology into relevant contexts. As some of the youngest leaders, we formed genuine connections, friendships, and mentorships with the youth as we served as role models and support.

Panich, Lee (Santa Clara University) and Monica Arellano (Muwékma Ohlone Tribe)
[26]

Under the All-Seeing Eye: The Archaeology of Native Californian Resistance at Mission Santa Clara

The façade of Mission Santa Clara de Asís features the All-Seeing Eye of God, a symbol that serves as a reminder of the omnipotence of the Christian God. This symbolism reinforces ample archival evidence that the Franciscan missions of Alta California—like Spanish missions elsewhere in the Americas—were strictly controlled social spaces that relied on real and perceived surveillance to enforce cultural conversion. Yet, recent archaeological research at Mission Santa Clara and other nearby missions in central California paints a more complex picture of how Native Californians navigated the structures of missionary colonialism. A key insight is drawn from the spatial distribution of certain features and materials from the Native neighborhood at Mission Santa Clara, including large quantities of projectile points and lithic debitage as well as features thought to represent traditional mourning ceremonies. Taken together, these archaeological patterns demonstrate that Indigenous people maintained spaces that were outside of the control of Franciscan missionaries and other colonial officials, underscoring the notion that Native Californians rejected large portions of the mission project.

Pans, Miquel [185] see Toyne, Jennifer Marla

Pappenfort, Logan [72] see Morgan, Brooke

Parbus, Brett (University of Georgia) and Stephen Kowalewski (University of Georgia)
[218]

The Past and Future of Archaeological Prospection

Archaeological prospection refers to the identification of subsurface cultural features by nonintrusive techniques. The prospection literature exhibits a simple evolution from pioneering application of techniques to their more common use. The method developed by Luis Barba and colleagues at the Laboratorio de Prospección Arqueológica, UNAM, represents a separate prospection lineage in that it employs a whole battery of techniques systematically and synoptically, it is multidisciplinary, holistic, applicable in a wide variety of natural and cultural settings, and it can address anthropologically important problems requiring observations at scales much larger than that of excavation. We illustrate this method with an example from collaborative research in Coixtlahuaca, an urbanized region in ancient Oaxaca. Prospection is typically ancillary to excavation, but as we illustrate, in many contexts this relationship should be reversed, especially when the research problems call for data that excavation cannot produce because it would be costly, destructive, too small scale, unethical, or illegal.

Parbus, Brett [233] see Gragson, Ted
 Parbus, Brett [104] see Ritchison, Brandon

Parcero-Oubiña, César (INCIPIT-CSIC)
[28]

Geomatics for Landscape Archaeology: Dreams of Eternal Youth

Geographic information technologies already have a long history of use in archaeology. In fact, archaeology has perhaps been the field of humanities where these technologies have reached the most widespread development, in many cases becoming part of the “standard package” of work for any archaeologist. To what extent is this true, or are they still more a part of a specialized field of work? Is there still room for innovation or have we reached a more static and conformist full maturity? What has been their impact after all these years in the ways we approach landscapes? What scenarios can we conjecture for the coming years?

Parditka, Györgyi (University of Michigan)
[285]

Tale of Tells: Regional Variability of Bronze Age Ceramic Assemblages in the Eastern Carpathian Basin

During the Middle Bronze Age (ca. 2000–1500 BC) the Eastern Carpathian Basin was populated with tell societies of various cultural traditions. Tell sites play a focal role in any narratives that address Bronze Age societies in this area. They are often seen as key to maintaining cultural traditions and are used in defining relative and absolute regional chronologies, exploring cross cultural relationships and evaluating social structures. This poster focuses on multiple tell sites along different waterways within the territory of the Ottomány-Gyulavarsánd culture. While it is often assumed that traditions were shared across different tells and non-tells in a given area and internal homogeneity at large is presumed by the use of the archaeological culture concept, the degree to which material culture demonstrates shared cultural traditions in the Lower Körös area remains to be seen. The poster compares the use of decorative techniques, stylistic elements, and stylistic grammar to evaluate the extent and scale of consistency in cultural traditions across the landscape. By utilizing both excavation and surface collection assemblages the analysis aims to assess variation in practices over a larger portion of the Lower Körös area.

Parditka, Györgyi [68] see Ullinger, Jaime

Pardoe, Colin [130] see Brockwell, Sally

Pardo-Gordó, Salvador [308] see Barton, C. Michael

Paredes Gudino, Blanca [214] see Healan, Dan

Parsi, Alicia [89] see Malloy, Hayley

Pargeter, Justin (NYU; University of Johannesburg), Adela Cebeiro (New York University) and Saul Shukman (New York University)
[126]

Revisiting Bipolar Technology's African Distribution and Diversity

Bipolar reduction is a central strategy in Pleistocene archaeology, recognized as an archetypal “expedient” technology. It entails hammer and anvil flake production, suitable for stabilizing smaller cores during miniaturized flake production. Despite its widespread occurrence and decades of study, debates persist in the

bipolar literature. These debates center on how and why ancient toolmakers used bipolar reduction (e.g., the wedges vs. cores debate) and whether shifts in humans' use of bipolar technology delineate periods in Paleolithic archaeology. This paper assesses Horta et al.'s (2022) "Lithic Bipolar Methods as an Adaptive Strategy through Space and Time," a recent bipolar technology metastudy, focusing on their use of African archaeological evidence. We augment their survey with (1) search terms for African bipolar technology instances and (2) a reevaluation of bipolar implements as cores rather than wedges. The results show a strong correlation between periods of lithic miniaturization and bipolar technology, supporting the widespread assumption that bipolar implements represent cores and not wedges. Our study demonstrates the complexities of understanding ancient humans' use of expedient technologies across space and time.

Paris, Elizabeth (University of Calgary), Gabriel Laló Jacinto (Centro INAH-Chiapas) and Roberto López Bravo (Universidad de Ciencias y Artes de Chiapas)

[230]

The Archaeoacoustics of Tenam Puente, Chiapas, Mexico: Auditory Monitoring of an Ancient Monumental Zone
Current research on ancient Maya cities is radically revising our knowledge of their economies. Scholars are beginning to identify the archaeological remains of marketplaces, currencies, and other elements of extensive commercial exchange. However, the surveillance of ancient economic spaces and institutions is rarely investigated in archaeological research, including the ways that built environments were used to organize economic institutions such as ancient marketplaces, and to facilitate oversight and interventions by political authorities. Were these marketplaces controlled by the invisible hand of the market, or by the all-too-visible hand of political rulers? This study examines elite surveillance of an ancient marketplace at the Maya city of Tenam Puente, one of the most important political capitals on the western Maya frontier during the Late Classic (600–900 CE) and Early Postclassic (900–1250 CE) periods. This presentation investigates the acoustic characteristics of the monumental zone that facilitated the monitoring and policing of various urban locations by the city's rulers and administrators.

Paris, Elizabeth [320] see Sullivan, Timothy
Paris, Elizabeth [83] see Tarkanian, Michael

Parisatto, Matteo [12] see Cagnato, Clarissa

Parish, Ryan (University of Memphis) and Robert Selden (Stephen F. Austin State University)

[24]

Sourcing Gary Points at the Poverty Point Site and Chert from the Trans-Pecos and High Plains Regions
The chert source analysis of Gary projectile points at the Poverty Point site reveals the movements of communities and/or toolstone resources. The study investigates westward connections at the site as indicated by the potential influx of Edwards Plateau chert. Varieties of Edwards Plateau chert from the Trans-Pecos and High Plains regions of Texas are macroscopically similar to varieties of St. Louis and Ste. Genevieve "northern gray" chert from the Highland Rim. The possibility that Edwards Plateau chert is being utilized at the Poverty Point site is investigated through the reflectance spectroscopy analysis of 312 Gary projectile points recovered at the site. Results may demonstrate the presence of western influences not previously investigated.

Parish, Ryan [24] see Sherman, Simon

Park, Jang-Sik [23] see Greaves, Aspen

Park Huntington, Yumi (Framingham State University) and John Warner**[30]***Sacred Landscape, Mesocosm, and Cosmology: The Late Formative Period at Jequetepeque-Jatanca*

How does architectural construction relate to the surrounding landscape and a broader cosmological framework? This paper discusses the relationship among architecture, geography, and cosmology at the site of Jequetepeque-Jatanca in the Jequetepeque Valley on the northern coast of Peru. This site was occupied mainly during the Late Formative period (approximately 500 BCE–100 CE) by local coastal populations, resulting in the construction of six monumental architectural compounds located on a relatively undifferentiated flat plain. Only one partially elevated structure exists at the site, a unique acropolis that radiocarbon tests and excavations indicate was the very first building constructed there. This acropolis could be understood as a mesocosm for its relationship to the surrounding sacred mountains and even celestial bodies, functioning as a specialized meeting place between the divine and human realms. We argue that the acropolis exhibits a specific cosmological relationship with the nearby mountain Cerro Cañoncillo, creating an almanac based on alignments of solstices and equinoxes that connected the site's inhabitants to a larger cosmic framework. This paper will discuss the rationale behind Jatanca's geophysical location and spatial considerations for its ritual practices, including an analysis of its surrounding environment.

Parker, Caitriona (University of Massachusetts, Boston)**[319]***Food as Freedom: Examining Afro-Indigenous Foodways at the Late Eighteenth- to Early Nineteenth-Century Seneca Boston-Florence Higginbotham House, Nantucket, Massachusetts*

In the face of White settler-colonialism and objection to the forces of anti-Black racism in the eighteenth century, Nantucket's New Guinea community formed as a racially diverse group of Africans, African Americans, Native Americans, and Pacific Islanders. Central to this community was formerly enslaved Seneca Boston and his Afro-Indigenous family. Archaeology conducted at the Seneca Boston-Florence Higginbotham House (built 1774) is helping to reveal how the Boston family strategically negotiated racial and ethnic identities to persist. This paper combines zooarchaeological data with documentary archaeology to present a comprehensive foodways analysis of the first generation of Bostons. By understanding the social implications of food for the Boston family, this analysis reveals the ideologies and economies that influenced how the Boston family procured, prepared, and consumed their food. While food is not an inherent indicator of racial or ethnic identity, this paper views food as an expression of cultural values. By examining food in a mixed-race household, this paper allows a greater understanding of food's role in identity negotiation in free, Afro-Indigenous contexts in New England and offers insight into racial autonomy and cultural persistence in Diasporic communities.

Parker, Evan (National Park Service)**[261]***Chair***Parker, Evan (National Park Service)****[261]***Investigating Middle Preclassic Domestic Occupations of the Puuc Region, Yucatán, Mexico*

Research conducted by the Bolonchen Regional Archaeological Project over the last several decades has firmly established the presence of Middle Preclassic occupations across the Puuc region. Survey and excavation at sites such as Xocnaceh, Yaxhom, and Kiuc have identified and confirmed the antiquity of a variety of forms of Middle Preclassic public architecture. Domestic compounds have also been identified through survey. This paper examines Middle Preclassic household archaeology across the northern Maya Lowlands and reviews the relationships between domestic architecture and public spaces. At the Middle Preclassic Puuc village of Paso del Macho, domestic architecture was constructed in the site center upon initial occupation around 900 BC but was eventually covered by public architecture around 500 BC. Domestic architecture then began to spread outward from the settlement core and increasingly began to diversify with regard to formal construction characteristics and layout. Recovered ceramics suggest little

differentiation in pottery economics between public spaces and domestic compounds, indicating that social differentiation may have other material proxies.

Parker, Glendon (University of California, Davis), Kyle Burk (University of California, Davis), John Verano (Tulane University) and Gabriel Prieto (University of Florida)

[212]

Proteomic Sex Estimation of a Gendered Sacrificial Context in Pampa la Cruz, North Coast of Peru

Protocols of ritual violence result from an interplay of political structures with multiple social factors, including roles of gender and age. These patterns often manifest as a biological sex-bias in sacrificial bioarchaeological contexts. In the Chimú Pampala Cruz site (AD 1050–1520), 86 individuals were interred surrounding three high-status nonadult individuals with ages ranging from 6 to 15 years old. One of the high-status individuals had highly preserved male gendered clothing. A full analysis of the context requires accurate sex assignment of the individuals, both high-status and associated sacrificed nonadults, that could test the alignment of sex and gender as well as any sex bias among associated nonadult sacrificial victims. Anatomical markers are ambiguous for this age and not informative. Proteomic sex estimation was therefore attempted to resolve the biological sex of the high-status individuals and quantify sex-bias among the associated sacrificial victims. Proteomic sex estimation of the male gendered individual was male biological sex, confirming cisgender, due to unambiguous detection of the biomarker peptides from the Y-chromosome form of amelogenin. Extension of proteomic sex estimation to other individuals will highlight other relevant factors such as sex bias among associate sacrificial nonadult victims.

Parker, Glendon [272] see Fournier, Nichole

Parker, Katherine (University of Mary Washington)

[82]

Tracing Theoretical Approaches to Constructing and Contesting Whiteness in Southeastern Archaeology

Whiteness has been an especially salient phenomenon in shaping the histories, identities, and landscapes of the US Southeast, even as social and political rhetoric have long worked to render Whiteness invisible and implicit. However, explicit archaeological examinations of Whiteness have been comparatively limited within the theoretical terrain of critical race studies, especially as our discipline grapples with the legacy of colonialism and White supremacy on those we study in the past and ourselves. In this paper, I highlight the dialectical relationship between archaeology and White social constructs, which informs the way that land managers, heritage tourism, and popular media subsequently maintain “useable pasts.” I trace the influence of dominant theoretical frameworks that Southeast archaeologists have favored on the ways that we have engaged Whiteness as a racial construct and a process. Though Southeast archaeology has long been presumed to lack meaningful contributions to broader archaeological theory, I argue that both archaeological sites and practitioners in the Southeast are especially well positioned to direct the trajectory of meaningful developments in critical Whiteness studies.

Parkinson, William [116] see Ridge, William

Parkinson, William [172] see Silverman, Danielle

Parmington, Alexander [32] see Guderjan, Thomas

Parnas, Michael (Michigan State University) and Megan Savoy (University of Michigan)

[198]

Modeling the Persistence of Helminth Infections in Small-Scale Societies

Parasitic infections present in human populations are often correlated with increased sedentism,

interaction with domesticated animals, and urbanism. However, parasitic population trends are rarely used to infer ancient human behavior. In this study we examine the relationship between soil-transmitted helminth (STH) infection rates and small sedentary communities. We propose a deterministic dynamical model based on modern studies of human-parasite *Ascaris lumbricoides* populations to estimate the minimum human population (breakpoint) necessary to sustain a STH infection. Dynamical models describe the motion of a point (e.g., STH or human populations) through time and deterministic models exhibit no randomness. We hypothesize that human movement between communities of varying size can maintain an endemic STH population within small communities below the breakpoint. Preliminary results indicate that a breakpoint does exist for human-parasite relationships. Also, the model indicates that STH populations can take decades to become extinct when human populations are just below the breakpoint, supporting our hypothesis that small perturbations due to human movement can sustain an STH population. In future studies, we will test our model with current and archaeological small communities evincing helminth infections and develop an agent-based model. These models can be used to understand human mobility and social network exchange.

Parpal Cabanes, Esther [230] see Sánchez Gamboa, Ángel

Parris, Caroline (Iowa Office of the State Archaeologist)
[137]

A Box Labeled "Mystery. Misc. Headaches": Inherited Problems in Collections Management

The term "curation crisis" describes the challenges facing collections care on a large scale: issues of limited space, staff, and funding and of meeting federal curation standards. Yet, beyond these big picture problems, some of the greatest challenges of managing archaeological collections are the smaller collections problems one inherits from previous collections managers, past archaeologists, short-term volunteers and interns, and colleagues. These problems can take the form of partially finished projects, a box of found-in-collections items simply labeled "mysteries," artifacts pulled for analysis, loans, or exhibits that were never returned to their boxes, or a loss of institutional memory, among myriad other to-do list items that were never completed. This paper presents a selection of inherited collections problems, explores their causes, and offers strategies for dealing with these problems and reducing the scale, if not the quantity, of problems our successors in collections management will inevitably inherit.

Parris, Caroline (Iowa Office of the State Archaeologist)
[292]

Discussant

Parton, Phillip (Australian National University) and Geoffrey Clark (Australian National University)
[155]

Urbanization in Ancient Tonga: The Tongatapu Low-Density Urban System

The concept of low-density urbanization has been an important development in recognizing the diversity of past human settlements. However, the key challenge to studying low density urbanization with archaeological data, particularly in tropical zones, has been the difficulty in acquiring past built environment data. The introduction of lidar mapping has proven revolutionary in our understanding of low-density urbanization by capturing the data necessary to understand the core functions of settlements, highlighting the importance of social interactions in generating social and economic growth. In this paper we present an integrated approach that combines lidar survey and archaeological fieldwork with recent developments in settlement scaling and growth theory to understand the built environment of Tongatapu; the location of an archaic state whose influence spread across the southwest Pacific Ocean between the thirteenth and nineteenth centuries AD. Results indicate a long trajectory of settlement growth on Tongatapu with earth mounds constructed in the first millennium AD, and that the processes of urbanization began well before the development of an archaic

state. The further use of quantitative approaches will provide new insights into the diversity and sustainability of Pacific societies and our understanding of the low-density urban phenomenon.

Pascal, Talon [35] see Oliver, Kristin

Pascali, Pamela (Idaho State University), John Dudgeon (Idaho State University) and Kateea Peterson (Idaho State University)

[41]

Factors Influencing Obsidian Procurement and Use in the Snake River Plain, Idaho, and Its Environs

Many tool-quality obsidian sources can be found across the Snake River Plain (SRP) in southern Idaho and adjacent geologic areas. This material was widely used in prehistory, with some artifacts discovered as far away as the Ohio River Valley. In order to better understand the selection and use of regional obsidian sources, we undertook experiments to evaluate the material properties and to compare the performance differences based on standardized instrumental testing. Specifically, we use surface profilometry and impact hardness testing to estimate the structural and mechanical properties of SRP and other regional obsidians and compare this performance data to the known distribution of provenanced artifacts. We additionally “fill in” this provenance dataset with our own geochemical analysis of lithic artifacts and sub-source variation, using pXRF and LA-ICP-MS of obsidian sources in northern Nevada, western Wyoming, and eastern Oregon. We predict that material that possesses greater textural homogeneity, impact resistance, and reduced surface roughness will be preferentially selected for use. These represent more predictable materials, and their frequency of use should increase through time, as obsidian sources are discovered and exploited. Our results have implications for regional lithic procurement, as well as noteworthy long-distance transport of some eastern SRP/Yellowstone-Teton obsidian sources.

Pascali, Pamela [35] see Dudgeon, John

Paskulin, Lindsey [30] see Duke, Guy

Pasqual, Theresa (Pueblo of Acoma ATHPO Director)

[144]

Discussant

Passalacqua, Nicholas, Kaleigh Best (Western Carolina University), Rebecca George (Western Carolina University) and Katie Zejdlik (Western Carolina University)

[300]

Best Practice Recommendations for the Treatment of “Discovered” Human Remains Lacking Provenance

In recent years there have been a number of high-profile cases where human remains were “discovered” resulting in media attention due to the unethical conditions in which the remains were encountered. Unfortunately, the discovery of human remains lacking provenance in academic laboratories or museum archives is common, particularly after staff turnover or structural reorganization within an institution. While the details and excuses for these incidents vary, in all cases the origins of these poorly treated remains are misconduct on behalf of the individual(s) who accepted and mistreated the remains, and potentially on the institution through a failure of accountability and quality assurance practices. Regardless of the circumstances of the discovered human remains, this presentation seeks to provide guidance for what to do when human remains lacking provenance are encountered. The importance of reporting (both internally and externally), documentation, and analysis to ensure proper final disposition is paramount. It is also vital for individuals to recognize their limitations as experts and to contact the appropriate legal authority to avoid continued unacceptable treatment and liability for mishandling the remains. These recommendations are based on the

ethical principles of non-maleficence, respect for persons, scientific integrity, stewardship, transparency, and truth-telling.

Patrick, Shelby [318] see Pacheco, Ellen

Patrik, Jan [255] see Hill, David

Patton, Katherine (University of Toronto), Thiviya Vairamuthu (University of Toronto), Caitlin Coleman (Archaeological Services Inc.) and Dena Doroszenko (Ontario Heritage Trust) [147]

Teaching Curation: Using Collections to Foster Disciplinary Reflection and Research Opportunities among Undergraduates

Despite decades-long acknowledgment of a curation crisis, undergraduate education in archaeology continues to emphasize excavation as central to the discipline and to our understanding of the past. Moreover, lab classes that emphasize analytical skills are more common than those that teach curation procedures. Whether consciously of it or not, this conveys to our students that collections management is not their concern, does not matter to archaeologists, and is irrelevant to the investigation of archaeological collections. Yet collections management can be much more than routine management of artifacts for storage and display; it can be a generative process that leads to object-focused interpretations and new research questions. Following Voss (2012), the University of Toronto, Ontario Heritage Trust, and Archaeological Services Incorporated developed a community-engaged, experiential learning undergraduate course focused on collections management. It emphasizes student skill development, the research potential of underreported existing and legacy collections, the sociopolitical context of excavation, and sustainability.

Patton, Margaret [150] see Clark, Andrew

Patton, Natalie [9] see Gillaspie, Amy

Patty, Nathan [282] see Stoker, Owen

Pauketat, Timothy (University of Illinois) and Carrie Wilson (Quapaw Nation) [253]

The Arkansas Connection and David G. Anderson

From the mouth of the St. Francois River in eastern Arkansas, up along the Ohio River, and northeast to the Varney-culture inhabitants of greater Cahokia, ancestral Quapaw people defined the archaeology of both the central Mississippi River valley and David G. Anderson. Understanding a vast swath of precolonial history across more than 10 centuries necessarily entails big data of a sort sufficient to demonstrate similarities and historical linkages in celestial knowledge, mound construction, and ceramic design and technology. In honor of DGA, we focus our pattern recognition on mollusk shells and pottery temper, lunar alignments, and mound and pottery forms.

Paul, Aidan [284]

Woodland and Mississippian on the Boundaryland: A Case Study from the Yadkin-Pee Dee Drainage

This paper addresses foundational questions regarding the chronology of the large Late Woodland period

village of Forbush Creek in the Yadkin-Pee Dee drainage of North Carolina. Ceramic and radiocarbon evidence suggests that while multiple occupations are present, the excavated area primarily dates to AD 1200–1400. Interactions with other communities farther south in the drainage are explored through analysis of complicated stamped ceramics. Previous theories interpreting the history of the drainage (Berger and Hutchinson 2019; Jones 2017) are critically examined in light of new data from Forbush Creek and analysis of ceramics, lithics, radiocarbon dates, burials, settlement patterns, ecology, and community politics from across the drainage, and the reasons for the slow pace of Mississippianization in the Piedmont are explored.

Paulette, Tate [215] see Grossman, Kathryn

Pavao-Zuckerman, Barnet (University of Maryland)
[260]

The Paradox of Livestock: Transformative Agents and Tools of Resilience

The introduction of Eurasian domesticated animals during the European colonial invasion of the Americas led to rapid, large-scale transformations of North American landscapes, irrevocably altering the relationships between Native people and Native landscapes. Paradoxically, these same alien animals were employed by Native actors as part of strategies for resistance and resilience. This contradiction exists both in the North American Southeast, where livestock were often slow to catch on, and in the Southwest, where cattle ranching dominated the Spanish colonial mission system. In both contexts, despite radical differences in history, ecology, and culture, the day-to-day decisions of seventeenth- and eighteenth-century actors set in motion large-scale and, at times, ferociously rapid feedbacks that were neither intentional nor predicted, but nevertheless transformed human ecosystems and the daily lives of the colonized and colonizer.

Pavell, Dakota [41] see Greaves, Russell

Pavlovic, Daniel [37] see Echenique, Ester

Paxton, Jamie [257] see Bardsley, Sandy

Payne, Trevor [43] see Uldall, Tamara

Paz Quercia, María [126] see Méndez, César

Pazan, Kyra [225] see Stewart, Brian

Pazmiño, Estanislao (Yale University)
[161]
Chair

Pazmiño, Estanislao (Yale University)
[161]

Trapichillo: Una mirada hacia las interacciones interregionales tempranas en el valle de Catamayo durante el I ro y 2do milenio BCE

En las últimas décadas las investigaciones arqueológicas en el área andina han dirigido, con gran interés, su

mirada hacia los hallazgos efectuados en el extremo norte de Perú y el sur del Ecuador. El carácter temprano de las ocupaciones y su participación en redes de intercambio interregional han desempolvado nuevamente antiguas inquietudes sobre el carácter de las redes de interacción tempranas que conectaron los fenómenos culturales entre distintas regiones geográficas y culturales. En la presente ponencia reviso la información arqueológica sobre las ocupaciones tempranas del valle de Catamayo, ubicado en los Andes bajos de la provincia de Loja al sur de Ecuador; y expando la discusión sobre los desarrollos locales, las influencias regionales, y las esferas de interacción tempranas a partir de la información preliminar de las excavaciones que se llevan a cabo en el sitio Trapichillo.

Pearsall, Deborah (University of Missouri), Philip Riris (Bournemouth University) and Peter Siegel (Montclair State University)

[127]

The Evolution of Plant Resource Diversity in Precolonial Puerto Rico with Direct Implications for the Rest of the Greater Antilles

Except for Jamaica, the earliest human occupations in the Greater Antilles date to ca. 6000 cal yr BP. Contrary to older ideas, the view taking shape now is that survival strategies incorporated a range of plant domesticates along with wild resources obtained through foraging, collecting, hunting, and fishing. This should not be surprising, since the earliest colonizers of the Greater Antilles originated in Central America, where agriculture is well documented by ca. 5000–7000 BP (Piperno and Pearsall 1998). In this paper, we trace the evolution of plant resource diversity through time from the earliest occupations of Puerto Rico. The earliest settlers on the island created anthropogenic landscapes, which later colonists further modified with new introductions of plants originating in lowland South America. Radiocarbon and paleoenvironmental records are integrated with biodiversity trends in modeling dispersal and colonization processes in the precolonial Caribbean. Applying measures of biodiversity, richness, and evenness to microbotanical datasets available for Puerto Rico reveal declines in diversity for both the initial and later colonizing populations of the island. These findings are consistent with expectations from agroecology, whereby productive domesticates are identified and over time exploited in greater proportions to other taxa, both wild and domesticated.

Pearson, Charles [57] see Weinstein, Richard

Pearson, Charlotte [176] see Larrick, Dakota

Pearson, Kristen (Harvard University)

[23]

Silk in the Brambles? Evidence for Xiongnu Dress from Circular Graves

Though the well-preserved textile finds from Noin Ula are some of the best known archaeological objects from this period in Mongolia, textiles and leather objects from Xiongnu circular graves are comparatively understudied. In part this is due to differences in preservation; circular graves are shallower than terrace tombs and organic artifacts found in these contexts, though not uncommon, are fragmentary and mineralized. In this paper, we present data on textile and leather traces from more than two dozen circular graves from three different regions of the Xiongnu world. Microstratigraphic analysis of mineralized organic matter sheds light on the relationships between different materials used to construct garments and burial trappings, while preserved structural elements like seams, hems, and linings speak to the technical skill of Xiongnu craftspeople. Importantly, the predominance of woven wool textiles belies the notion that the Xiongnu relied heavily on imported Chinese silk and suggests that some weaving may have been local. Combining technical analysis with multiple forms of microscopy to compare the complete textile *chaîne opératoire* across graves, sites, and regions, this paper shows that even fragmentary and trace organic remains can help address economic, technological, and political questions.

Pease, Allyson (Wrangell-St. Elias National Park and Preserve) and Matthew Wooller (University of Alaska, Fairbanks)

[120]

Isotopic Evidence of Long-Term Aquatic Resource Use at Tanada Creek, Alaska

Salmon are considered a critical subsistence resource in the Copper River basin, Alaska both currently and traditionally. Salmon migrations typically occur during a relatively short period in the summer, and provide a reliable, abundant influx of food. The duration of their presence in the basin and history of use are not well understood. In the past, runs of anadromous fish were likely impacted by the presence of glacial dams that blocked the outlet of the Copper River and caused Glacial Lake Atna to occupy the basin until about 10,500 years ago. Nataef Na' is an archaeological site near a known salmon stream, Tanada Creek, in the upper Copper River basin. Hearths at the site were radiocarbon dated to before and approximately 6,000 years after the draining of Lake Atna. Sediments from these cooking features were subjected to the stable isotope analyses of carbon and nitrogen to examine past fish use and changes in diet during an environmentally transformative period.

Pease, Allyson [120] see Reininghaus, Lee

Pebworth, Jared [294] see Rathgaber, Michelle

Pecci, Alessandra (University of Barcelona)

[218]

Chair

Pecci, Alessandra (University of Barcelona)

[218]

El legado del Laboratorio de Prospección Arqueológica de la UNAM en el estudio de residuos químicos en el Mediterráneo

Las técnicas de análisis de residuos químicos desarrolladas en el Laboratorio de Prospección Arqueológica de la UNAM se han aplicado también en contextos europeos y principalmente del Mediterráneo Occidental, favoreciendo un acercamiento interdisciplinario al estudio del uso del espacio y de los contenidos de los recipientes cerámicos de diferentes periodos. En particular, gracias a la combinación de los *spot tests* desarrollados en México con la cromatografía de gases acoplada a espectrometría de masas, en conjunto con resultados de trabajos etnoarqueológicos y de arqueología experimental, se han podido investigar las diferentes fases del ciclo de vida de los alimentos, desde su producción, transporte (principalmente en ánforas y dolia), pasando por la preparación hasta su consumo. Aquí se presentarán algunos ejemplos de las investigaciones realizadas en el marco de diferentes proyectos e instituciones (UNISI, UNICAL, ERAAUB, IA-UB, INSA-UB, MdM CEX2021-001234-M, RACAMed II - PID2020-113409GB-I00) y de las continuas colaboraciones con el Laboratorio de Prospección Arqueológica.

Pecci, Alessandra [194] see Hernández-Grajales, Meztli

Pecci, Alessandra [218] see Sternberg, Robert

Peck, Katherine (University of New Mexico)

[173]

Land Use and Settlement-Pattern Change in Mauka Kawaihae, Hawai'i Island, 1790–1930

Pre-1778 land use in Hawai'i Island's leeward Kohala uplands has been extensively documented by archaeologists, particularly those studying the ancient *mauka* (upland) Leeward Kohala Field System. However, "historic" (post-1778) land use—particularly in the uplands—is not as well understood. In this poster, I provide a review of the documentary and oral records associated with the late eighteenth- to early twentieth-century settlements and agricultural land use patterns in mauka South Kohala, focusing in particular

on the *ahupua'a* (traditional land tenure units) of Kawaihae 1 and 2. These *ahupua'a* include a detached section of mixed dryland and intermittently irrigated agricultural fields known as the South Kohala Field System as well as the remains of two historic villages—Ho'ēpa to the north and Mākelā to the south. Finally, I review some of the prior historical and archaeological work and add to the record using archaeological data collected during Google Earth mapping and archaeological fieldwork between 2017 and 2022. Overall, these data provide additional context for the timing and nature of agricultural expansion in the pre-1778 field system located *makai* (downslope) of these settlements.

Peck, Katherine [308] see Gravel-Miguel, Claudine

Peck, Katherine [260] see Judkins, Abigail

Pecora, Albert and Jarrod Burks (Ohio Valley Archaeology Inc.)

[105]

The Search for Remains and Material Evidence on World War II Bomber Crash Sites: Combining Geophysics and Traditional Archaeological Approaches

During World War II, the United States and other countries lost many airmen in plane crashes. Crash sites vary considerably in size and complexity, with buried and near-surface components that must be located, assessed, and perhaps excavated. Geophysical survey is one way to improve the cost/time effectiveness of crash site investigations and recoveries. In this poster we explore how Ohio Valley Archaeology Inc., in partnership with the Defense POW/MIA Accounting Agency, used geophysical survey and excavation together to characterize portions of a B-24 crash site in France, along with transit mapping and RTK GNSS to georeference spatial data in a wooded setting. In addition to detecting the main impact crater, we argue that the geophysical data also may show the location of a wing and a secondary fall out zone created by the impact or post-impact explosion. Initial excavations, guided in part by the geophysical survey results, focused on the edge of the impact crater.

Pecoraro, Luke (Drayton Hall Preservation Trust)

[44]

New Directions for Archaeology at Drayton Hall

Fieldwork at Drayton Hall has taken place since the plantation was acquired by the National Trust for Historic Preservation in 1974 and continued through short excavation campaigns to the present. A renewed emphasis for archaeology is currently underway, with a strategic plan to more holistically explore the landscape and the service areas within the main house. This poster will illustrate the new trajectory of work with updates on recent findings.

Pedersen, Patrick (University of Tulsa)

[335]

Preparing the Surface (PRESUR): The Forgotten Step of "Seasoning" Food-Processing Ground Stone Tools and Its Implications for Use-Wear Analysis

In Southwest Asia ground stone tools used in food processing, like mortars and querns, started proliferating at the end of the Paleolithic. Recently these tools have received increased attention with researchers attempting to establish what food these tools were used to process through microscopic use-wear and residue analysis. However, there is an aspect of tool use that most use-wear studies neglect to recognize: "seasoning" the tool. Seasoning is the act of preparing the tool before initial use by processing then discarding material, thus "sealing" the active surface and preventing harmful grit and rock particles from entering the foodstuff. Not considering this crucial step in tool surface preparation potentially means that use-wear analyses, both qualitative and quantitative, fall short when assessing subsequent use. My study is an experimental program based on ethnographic data and input from current culinary traditions and tests ways of seasoning tools that would have been available to people in Southwest Asia 15,000 years ago. It will track the wear traces resulting from experimental seasoning on tool replicas, creating a baseline for future

research, while refining current approaches in ground stone use-wear analysis and improve our understanding of past foodways.

Peeples, Matt (Arizona State University), Anthony Wende (Arizona State University) and Matthew Kroot (Arizona State University)

[102]

Using Unmanned Aerial Vehicle (UAV) Photography to Develop Preservation and Management Plans at S'edav Va'aki, Arizona

As part of the Arizona State University field school at S'edav Va'aki, the research team reached out to ASU faculty from the Unmanned Aerial Systems department to develop a plan for capturing true color and infrared imagery and photogrammetric data from the project area. The goals for these images were focused on developing high-resolution baseline data to complement on-the-ground recording efforts and to estimate (1) the locations and extent of active erosional processes, (2) the volume of vegetation and clearance needs in and around archaeological features, and (3) the locations and subsurface extent of features such as ancient canal segments and middens expected to be within the project area based on previous excavations in and around the site. In this poster we outline the potential of using UAS imagery for the development and continued monitoring of land management plans in an urban setting. We highlight some of the complications of this project including the proximity of the site to an international airport and previous land disturbance.

Peeples, Matt (Arizona State University)

[102]

Chair

Peeples, Matt [308] see Hruschka, Daniel

Peeples, Matt [102] see Kroot, Matthew

Peeples, Matt [102] see Ptacek, Alexandra

Peeples, Matt [102] see Umbriano, Chiara

Peixotto, Becca

[60]

Challenges in Dating Maroon Contexts in the Great Dismal Swamp

Speckled with mesic islands and peat hummocks, the soggy lowlands and standing water of the Great Dismal Swamp in Virginia and North Carolina were home to thousands of African and African American Maroons (ca. 1608–1863) and a significant feature of the landscape of Indigenous Americans for many centuries prior. In part due to the extensive reuse and repurposing of material culture by the Maroon communities seeking refuge deep within the swamp, temporally diagnostic artifacts are rare. Soil conditions and possible waste disposal practices mean preserved organic materials are even more rare. These combine to create challenges archaeologists dating the occupations of individual Maroon sites and establishing a higher-resolution temporal picture of Maroon activity across sites in the morass. Sayers (2014) and his Great Dismal Landscape Study successfully obtained OSL dates from a feature at one North Carolina site and more recent attempts to obtain scientific dates from two sites in Virginia have met with mixed results. This paper discusses the difficulties and what the new results can illuminate about the resistance history of the present-day Great Dismal Swamp National Wildlife Refuge.

Peixotto, Becca

[105]

Chair

Pelaez-Ballestas, Ingris, Natalia Delgado-Machuca (ENAH), Mariano Guardado-Estrada (UNAM), Jakob Cedió (Harvard University) and José Luis Punzo Díaz (INAH-Michoacán) [106]

Ancient Mitochondrial DNA and Genetic Variation in Northwest Mexican Populations

The development of genetic sequencing technology has allowed for the recovery of ancient DNA from bone samples belonging to individuals who lived thousands of years ago, opening a window to the past and to better understand the dynamics of ancient civilizations. This study describes the genetic variation found on the mitochondrial genome of 112 individuals from northwest Mexico who lived between 2,000 and 500 years ago. Haplotypes were assigned, genetic diversity was estimated and a principal coordinates analysis was applied to group samples according to their genetic distance. Haplogroup frequencies differ from those found in previous studies from Mesoamerican samples, with a higher prevalence of haplogroups B and C (28% each), A (25%), and D (18%). Four clusters were recovered from the pCoA with a high level of genetic variation, which indicates a great amount of gene flow between populations and that genetic differentiation is better explained by cultural aspects through time, rather than geographical distance.

Pelton, Spencer [219] see Mackie, Madeline

Peltzer, Summer (EPG a Terracon Company) and Christopher Schwartz (EPG a Terracon Company) [269]

Excavation at AZ T:12:220(ASM) / Las Cremaciones

Recent discussions surrounding cultural resource management in the Phoenix Basin have highlighted the importance of synthesis across firms, projects, and cultural resources. This poster examines archaeological investigations at AZ T:12:220(ASM), colloquially known as Las Cremaciones, with the purpose of compiling data available from past excavations to provide a holistic idea of what is known about the site. AZ T:12:220(ASM) / Las Cremaciones is a large prehispanic Hohokam village located in Laveen, Arizona, to the south of Phoenix, near the confluence of the Salt and Gila Rivers. In the fall of 2022, Terracon was involved in excavations that intersected the southwestern portion of AZ T:12:220(ASM) / Las Cremaciones and excavated a 30% sample of all non-mortuary features, inclusive of pit structures, thermal features, pits, and an oversized surface. This poster will present the results of Terracon's excavations and contextualize these data within other investigations conducted at the site to contribute to a broader understanding of what is known about AZ T:12:220(ASM) / Las Cremaciones.

Pena, Jose [70] see Long, Holly

Pendleton, Roxanne [224] see Mascarenhas, Shannon

Pengilley, Alana (University of Texas, Austin) and Fred Valdez Jr. (University of Texas, Austin) [164]

Sourcing Maya Lowland Chert Resources: A Multimethod Perspective

Within the Maya region, chert artifacts remain one of the most common material types recovered from archaeological excavations and are a core line of evidence when reconstructing ancient economy. However, methods for sourcing of chert through Mesoamerica have largely been underutilized. Archaeologists are often left wondering how these artifacts moved within regional and local exchange networks, and the influence particular source areas had over settlement patterns and economic development. Recent methodological developments within the field of chert provenance analysis have provided the opportunity to revisit these research issues. This paper will discuss the preliminary results of microscopic and geochemical analysis from recent geological sampling of northern Belize chert outcrops.

Pennington, Meagan [246] see Miller Wolf, Katie

Peralta, Eva [107] see Gil, Adolfo

Peralta, Eva [178] see Neme, Gustavo

Peraza Lope, Carlos [32] see Masson, Marilyn

Perdikaris, Sophia (University of Nebraska, Lincoln)

[148]

Overview of the Archaeological Work in Barbuda: A 20-Year Retrospective

Barbuda has been the focus of transdisciplinary investigation since 2005. Central to our work in Barbuda is our collaborative relationship with the outmost experts of the island, the Barbudan people. The foundation for all work on island is that of mutual respect for our academic disciplines and the expertise of Barbudans. Our research is research of relevance and in this session, we are presenting the latest findings from our archaeological work and the importance of applied work in the understanding, preservation, and conservation of island heritage during times of extreme weather and intensive development.

Perdikaris, Sophia [148] see Richards-Rissetto, Heather

Pereira, Gregory, Jorge Blancas (UNAM) and Agustín Ortiz (UNAM)

[218]

Aportes de la prospección geofísica para entender los asentamientos en medios lacustres de la cuenca de Zacapu, Michoacán, México

Hace más de tres décadas, Luis Barba y su equipo del laboratorio de prospección arqueológica del IIA, UNAM iniciaron una colaboración fructífera con investigadores del CEMCA en la cuenca de Zacapu (Michoacán) que continúa hasta nuestros días con instituciones francesas como el CNRS y la Universidad Paris I/Panthéon-Sorbonne. En este peculiar contexto lacustre, la aplicación de las distintas técnicas de prospección geofísica (magnética, eléctrica y georradar) ha revolucionado el conocimiento de estos asentamientos a pesar de las fuertes alteraciones provocadas por la agricultura moderna. Los datos obtenidos han permitido documentar un importante desarrollo arquitectónico en la zona durante el primer milenio dC y ofrecen nuevas perspectivas para entender la función y organización de los sitios. En esta ponencia se presenta un balance de los trabajos realizados incluyendo los más recientes y se plantean algunas propuestas para rescatar la amplia variedad de vestigios que, año tras año, desaparecen bajo el paso de los tractores en estos campos agrícolas.

Pereira, Thiago [178] see Bond Reis, Lucas

Peres, Tanya (Florida State University) and Aaron Deter-Wolf (Tennessee Division of Archaeology)

[249]

The Longue Durée: Food Insecurity and Climate Change in Precontact Tennessee

Dispersal and organizational changes of Indigenous communities ca. AD 1450–1550, over much of the North American midcontinent, has been attributed to a number of causes: drought, warfare, changing alliances, and access to resources. Potential connections between droughts and the end of the Mississippian period in the Middle Cumberland River Valley (MCR) of Tennessee are rooted in the phenomenon known as the “Vacant Quarter.” For decades scholars have suggested that these shifts, and the ultimate dissolution of Mississippian society in the MCR, may have occurred partially in response to severe droughts during the fourteenth and

fifteenth centuries. However, to date there have been few efforts to directly connect paleoclimate data with archaeological evidence from the region. To understand why people left these once-fertile environments, we focus on the social consequences—namely, food insecurity—and work backward to the root causes. In this paper we combine data from zooarchaeology with tree-ring calibrated drought indices, paleoethnobotanical data, paleodemographic profiles, and settlement patterns, to highlight the *longue durée* of persistent food insecurity for Mississippian period communities of the region.

Perez, Daniel
[103]

An Evaluation of Virgin Branch Social and Political Complexity through Painted Ceramic Design and Style

Social complexity in prehispanic societies within the North American Southwest has been studied through a variety of research avenues. Among the Virgin Branch people within the Moapa Valley of southern Nevada, archaeologists have pursued this topic through the study of architecture, burials and associated grave goods, and exchange networks. Among Virgin Branch archaeologists working in the Moapa Valley has been the competing notion of whether Virgin Branch society was egalitarian (Lyneis 1992) or ranked (Rafferty 1990). This study revisits this long dormant debate through the lens of a research medium not previously used to explore the nature of Virgin Branch social complexity—namely, painted design and style complexity on pottery. Inspired by a cross-cultural study conducted by Peter Peregrine (2007), this paper presents an exploratory assessment of Virgin Branch social complexity, through an adaptation of Peregrine's (2007) methods, using painted ceramics recovered from Adam 2 and the Main Ridge community. This study uses a comparative statistical approach to evaluate social complexity at Adam 2 and the Main Ridge community against Peregrine's (2007) findings as a means of assessing the utility of this analytical approach to the study of social complexity in the Virgin Branch region.

Perez, Gabina [59] see Jansen, Maarten

Perez, Stefanie (New South Associates Inc.)
[274]

Moderator

Perez, Stefanie [6] see Weber, June

Pérez-Balarezo, Antonio [9] see González-Varas, Marina

Perez Gomez, Jose Miguel
[158]

The Shipwreck of the French Fleet in Las Aves de Sotavento, Venezuela: A Seventeenth-Century Maritime Disaster

This presentation underlines the importance of Venezuela's underwater cultural heritage through continued research into the shipwreck of French King Louis XIV's fleet, which struck reefs in the Las Aves de Sotavento, in Las Aves Archipelago, Venezuela, the night of May 11, 1678. The fleet consisted of 30 vessels. At least 12 ships sank during this single event, taking the lives of likely hundreds of men. Preliminary studies suggest that we are in the presence of one of the largest and most important shipwrecks of the Atlantic World and the Caribbean. They also indicate the urgent need to research and safeguard this submerged archaeological site as a unique part of the world's cultural heritage.

Pérez-Juez, Amalia [179] see Forste, Kathleen

Pérez-Juez, Amalia [191] see Smith, Alexander

Perez Rodriguez, Veronica (University at Albany, SUNY)**[160]***Life after Urbanism: Investigating Classic Period Cities and Settlements in the Mixteca Alta, Oaxaca*

Those of us working in the Mixteca Alta region of Oaxaca have heard the saying that the “Classic period” in the region took place earlier, in the Late Preclassic. While the Classic period (AD 300–800) was a time of urban florescence in the Valley of Oaxaca, Basin of Mexico, Puebla, and the Mixteca Baja regions, investigations into finding large Classic period urban settlements in the Mixteca Alta region, have so far proven to be elusive. There have been mapping and a few excavation projects into what are thought to be Classic period sites at Yucuñudahui, Cerro Jazmín, Cerro de la Virgen, Cerro Encantado, Topiltepec, and Cuquila, but only two sites, Yucuñudahui and Cerro Jazmín have been excavated and dated using radiocarbon methods. And so far, only Yucuñudahui has yielded radiocarbon dates placing its occupation in the Classic period. This paper discusses new radiocarbon dates and occupation history data from Cerro Jazmín and compares it to the chronological information available for other Classic and Postclassic period sites throughout the region. The objective is to offer a broader regional perspective on how Mixtec communities and urban settlements fared after the initial period of urban florescence in the Late Formative period.

Pérez Ruíz, Francisco [303] see Hutson, Scott
 Pérez Ruíz, Francisco [321] see McAvoy, Scott

Periera, Carlos [29] see Thacker, Paul

Perkins, David and Ian Beggen (University of Michigan)**[266]***Assessing Interobserver Variation in Lithic Analyses of Resharpener*

Interobserver variation is a known phenomenon within macroscopic and microscopic lithic analyses. Thus far, many researchers have conducted extensive studies of variation between experts and novices in lithic analyses, and these studies have shown the importance of careful supervision and repetition of measurements. Here, we present findings from a study of interobserver variation of lithic analysis of a real archaeological collection of projectile points from the North American Southeast. This study adds to the body of knowledge concerning general lithic analysis and provides novel insights relating to analyses of resharpener in hafted bifacial technologies, including those involving gross linear measurements, indices of retouch, and more advanced methods such as geometric morphometrics. Observations and outcomes of this study further indicate the necessity for redundancy of measurements between observers. Further, this study highlights how lithic analyses of resharpener patterns of hafted bifaces can lead to drastic misinterpretations of the archaeological record.

Perla Barrera, Divina (UADY-PARYNA), Julien Sion (ArchAm-CEMCA-PARYNA), Fiana Hernández (UNAH-PARYNA) and Jennifer Arguijo (UNAH-PARYNA)**[118]***Materialización de las nuevas interacciones en la zona fronteriza entre Mesoamérica y el Área Istmo-colombiana durante el Postclásico Temprano: Un acercamiento desde Los Naranjos, noroeste de Honduras*

En los territorios considerados como los márgenes fronterizos entre Mesoamérica y el Área Istmo-colombiana, la transición entre el Clásico y Postclásico (siglos IX-XII dC) corresponde a un periodo de reorganización de sus sociedades. Particularmente en el noroeste de Honduras se caracterizaron notables evoluciones en los centros ocupados después del 800 dC, en su patrón de asentamiento, el repertorio arquitectónico y cerámico, o los ritos funerarios. En muchas ocasiones las novedades identificadas en la cultura material parecen concretar el desarrollo de nuevas redes de interacción con habitantes dentro y fuera de la zona fronteriza, mediante la integración de artefactos foráneos en su parafernalia o la adopción de nuevas prácticas. Aunque no se comprenden con precisión tanto las modalidades de circulación de bienes

como su significado sociopolítico, esta integración local de prácticas sociales y objetos compartidos con otros grupos que habitaban en un área geográfica muy amplia podría materializar verdaderas comunidades de prácticas. Sin embargo, estos procesos se desarrollaron diferentemente según los territorios, con base en dinámicas locales propias. Para aportar nuevos datos, se presentarán los resultados obtenidos en Los Naranjos y sus comparaciones a escala regional. Asimismo, se propondrán nuevos ejes de investigación que incluirán aspectos tecnológicos e iconográficos.

Perreault, Charles (Arizona State University)

[308]

Discussant

[308]

Chair

Perrot-Minnot, Sébastien [9] see Lohse, Jon

Perrotti, Angelina (Brown University; University of Wisconsin, Madison), D. Shane Miller (Mississippi State University) and Morgan Smith (University of Tennessee, Knoxville)

[67]

The Spatial Distribution of Pleistocene Archaeological Sites and Paleoenvironmental Records across North America
Research into the timing and process of human migration to North America at the end of the Pleistocene relies heavily on accurate paleoenvironmental reconstruction to understand habitable locations at the time. However, Pleistocene-aged archaeological sites in North America are rare, and specific paleoenvironmental information for these sites is often inferred from equally rare, nonlocal pollen records. Moreover, many of the trusted pollen records lack adequate temporal resolution. This poster examines the spatial relationship between Pleistocene archaeological and pollen sites across North America and evaluates the quality of pollen records in terms of their temporal continuity and resolution. Additionally, we address the challenges associated with obtaining Pleistocene-aged pollen records in different regions. Through this analysis, we identify geographic areas where future pollen research should be prioritized and explore the potential advantages of using non-pollen-based paleoenvironmental proxies.

Perry, Gabrielle (University of Colorado, Boulder), Arthur Joyce (University of Colorado, Boulder) and Akira Ichikawa (Kanazawa University)

[314]

Domestic Life at Río Viejo, Oaxaca

Recent fieldwork has investigated the Late Classic and Postclassic occupation at the floodplain site of Río Viejo in Oaxaca, Mexico. The residential features uncovered detailed domestic life in the settlement after political decentralization. Though causal factors for the Late Classic political decline at Río Viejo are yet to be confirmed, archaeological evidence suggests that this was a period of considerable change. Termination ceremonies were identified in Late Classic strata, which marked a shift from communal practices in the Late Classic to private domestic ceremonies in the Early Postclassic. Political decline in the Late Classic was also coupled with settlement decline throughout the region. Ongoing excavations at Mound 2, a large residential platform at Río Viejo, detailed domestic life associated with a large potential water management feature. This paper will discuss archaeological evidence of domestic life during the Postclassic transition and will present preliminary data on a possible recessional agricultural feature. New data will reveal the relationship between water management practices and changes in domestic space after the political decline at Río Viejo.

Perry, Gareth [257] see Little, Aimée

Perry, Jennifer (CSU Channel Islands)**[304]***Jeanne Arnold's Legacy on California's Channel Islands*

In honor of Jeanne Arnold, I discuss major theoretical and methodological themes in her research on the northern California's Channel Islands including (1) her focus on Late Holocene households as relevant units of past decision-making and current analysis, (2) lithic tool production and exchange, specifically chert resources and microlith industries on Santa Cruz Island, and (3) environmental context in relationship to major drivers of complexity within Chumash societies. In contrast to the emphasis placed on context in archaeological interpretation, what is not considered and articulated as often are the contemporary contexts of scientific inquiry in which different types and scales of context are situated. Citing publications from the early 1990s to early 2000s, both her own and responses to them, I also consider the gendered and processual context of California archaeology in which she operated and advanced anthropological understandings of island economies and hunter-gatherer societies. Finally, I reflect on how this broader context influenced responses to Arnold's work and how her contributions continue to inform archaeological research on the Channel Islands today, with recent scholarship having expanded on her hypotheses and datasets in important ways.

Perry, Megan [68] see Huskey, Delphi

Pestle, William (University of Miami)**[127]***Chair***Pestle, William (University of Miami), Carmen Laguer-Díaz (Long Beach City College, Long Beach), Matthew Schneider (University of Miami), Stephen Jankiewicz (Argonne National Laboratory) and Clark Sherman (University of Puerto Rico)****[127]***Raiders of the Lost Arca: An Early Foraging Landscape in Cabo Rojo/Lajas, Southwestern Puerto Rico*

Recent fieldwork in the intertidal zone of southwestern Puerto Rico has revealed a landscape of over 40 heretofore undocumented shell mounds (some as large as 4,200 m² and as tall as 10 m above the surrounding tidal plain) formed by millennia of targeted human foraging activity focused on genus *Arca*. Initial radiocarbon dates indicate that these mounds were formed between roughly 1200 cal BC and cal AD 450 (with further dates forthcoming), associating them with some of the earliest inhabitants of Puerto Rico, and making them contemporary with other, more distributed, middens in the surrounding region. Relatively undisturbed ancient landscapes of such size and density have no known parallels in Puerto Rico, but these features do share taxonomic similarities to other sites in Puerto Rico, the Virgin Islands, and the Lesser Antilles. Here, we present the results of combined archaeological excavation and paleoenvironmental reconstruction of nearshore habitats in the environs of the anthropogenic landscape, to evaluate and disentangle a series of equifinal behavioral explanations for their formation, persistence, and ultimate abandonment. Ultimately, we anticipate that this work will provide valuable insights into the interface between human foraging activities and paleoenvironmental change in an early period of Caribbean archipelagic occupation.

Pestle, William [127] see Sabo, Allison

Pestle, William [127] see Stone, Jessica

Peters, Ann (University of Pennsylvania Museum)**[29]***Chair*

Peters, Ann (University of Pennsylvania Museum)**[29]***Cordage and Binding Practices: From Artifacts to Bodies to Bundles in the Paracas Necropolis Mortuary Tradition*

The Paracas Necropolis mortuary tradition is famous for its embroidered garments and imagery, though the textile bundles built around each individual also have a complex sequence of other artifacts within huge cotton wrapping cloths, stitched and bound in place; other offerings are adjacent. Cordage is used to position the bodies of the deceased, and to unite diverse artifact components. Production practices for cords and other bindings include raw materials sourcing and processing to create structures employed for specific purposes. What may be the significance of raw materials, such as reeds, animal tissue, bast fiber, cotton, or human hair? Binding materials with different properties are employed in groups of artifacts that share forms of utility, such as types of weapons and feather ornaments. Was the organization of artifact production linked to their subsequent uses in hunting, combat or ritual, and social leadership within those realms? The mortuary data most directly reflect funerary practices and subsequent events to honor the dead. As cordage was both created and utilized as part of the ritual process, we can consider its relationship to sequences of postmortem events, social diversity in the cemetery population and the contributors to each tomb assemblage. ***Images include human remains.

Peterson, Emily [50] see Echavarri, Mikhail

Peterson, Jane (Marquette University)**[129]***Expanding the Niche: Gender and Bioarchaeology among Prehistoric Farming Groups*

In the early 1990s when I began my explorations of changing divisions of labor associated with agricultural transitions in the Levant, archaeology was grappling with the tip of the biocultural iceberg that was “gender” (sensu Fausto-Sterling 2000). During the intervening three decades, discussions of gender in archaeology have broadened. Studies have spread across many time periods and regions, and research is less often confined to edited volumes and special issues focused specifically on gender. In a real sense, gender studies have become a bigger part of mainstream archaeological literatures. This paper specifically examines the progress that archaeologists and bioarchaeologists have made leveraging datasets across disciplinary boundaries to enhance our understanding of gender in the past. While this crossover between material culture and biological data has been slow, its momentum seems to be building. Increased interest in gender is discussed using case studies from early agricultural contexts. The results are heartening because they describe a range of gender-inflected activity and kinship pattern variation that has often been masked by unilineal, developmental models that are coming under increasing theoretical scrutiny.

Peterson, Katea [41] see Pascali, Pamela

Peterson, Ryan (Indiana University, Bloomington)**[224]***Chair***Peterson, Ryan (Indiana University, Bloomington)****[224]***Hot Spot Analysis: Copper Production in the Northern Lake Superior Basin*

North America’s Native Copper Industry is one of the oldest metalworking traditions in the world, with metal use in this region dating to over 9,500 years ago. While several studies have focused on copper mining and use, few have focused on copper production. As a result, little attention has been given to the waste materials generated during the production process. The study of waste materials is vital to understanding what metallurgical production systems look like and how they are structured. This paper will examine the

geospatial organization of copper production throughout the Archaic period in the northern Lake Superior Basin. The organization of copper production will be examined through morphological analysis of copper waste materials from copper production sites across this region. This information will then be examined geospatially using the Optimized Hot Spot Analysis tool on ArcGIS to identify where stages of production took place as people and copper moved across the landscape. The structure of this production system will then be interpreted through a relational approach to production that seeks to understand the relationships that form between people, material culture, and the environment through assembling in the production process.

Peterson, Ryan [281] see Cowan, Jacqueline

Petillon, Jean-Marc [306] see Darmangeat, Christophe

Petras, Elysia (Temple University)

[227]

Chair

Petras, Elysia (Temple University) and Brandi MacDonald (University of Missouri Research Reactor)

[227]

Neutron Activated Analysis of Afro-Caribbean Ware Excavated Archaeologically from Six Pre-emancipation Sugar Plantation sites on Anguilla and Sint Maarten

This paper presents the preliminary results of neutron activation analysis (NAA) conducted at the University of Missouri Research Reactor's Archaeometry Lab on coarse earthenware sherds recovered archaeologically from three pre-emancipation-era plantation sites on Anguilla and three on Sint Maarten. Using sourcing studies, this research investigates emancipatory interisland social networks that enslaved and self-liberating individuals developed across imperial boundaries between the neighboring islands of British Anguilla and Dutch Sint Maarten.

Pettigrew, Devin (Center for Big Bend Studies)

[138]

Physics and Ballistics of the "Rabbit Stick," or Straight-Flying Boomerang

Straight-flying boomerangs—in North America commonly referred to as rabbit sticks—were used worldwide for both hunting and combat. When properly designed and implemented, the boomerang functions as an airfoil and gyroscope, slicing through atmosphere, generating lift, and traveling impressive distances. However, due to their combined rotational and forward velocity, boomerangs experience differential lift along the wing, resulting in the tendency to tilt, which combined with gyroscopic effects, can cause them to “precess,” in some cases returning to the user. Straight-flying forms, originally much more common than returning types, must be properly designed to overcome this tendency, but effective straight-flying designs can take various forms. Substantial kinetic energy combined with the focus of impact forces to small areas of the wing also makes boomerangs formidable weapons, but until now their ballistic potential remains largely unexplored. This paper describes the different characteristics that allow boomerangs to fly straight and presents results of throwing experiments with replica Southwest forms, where ballistic variables were recorded.

Pettigrew, Devin [138] see Schroeder, Bryon

Pettit, Daniel [269] see Hopt, Justin

Pettitt, Paul [141] see Meyering, Lisa-Elen

Pettitt, Paul [93] see Robitaille, Jerome

Peuramaki-Brown, Meaghan (Athabasca University), Shawn Morton (Northwestern Polytechnic) and Antonio Beardall (Texas State University)

[295]

Thoughts on the Most Recent Katun of Archaeological Heritage Management in Belize

Archaeological heritage management (AHM) involves identifying, protecting, managing, and preserving material remains of past human activity. In Belize, the Institute of Archaeology-NICH oversees AHM, including archaeological permitting, artifact management (including human remains), site designation and access, community/public engagement and education, and more. It also requires diverse interactions with rights holders, stakeholders, and interest groups related to Ancestral and present-day Maya heritage and the many other diverse communities and cultures of this small nation. At a fundamental level, the AHM system developed in Belize works. Indeed, it is the system within which all the other research presented in this session was produced. However, no system is perfect. In this paper, we explore details of the AHM system in Belize and how it stands out from other systems we have encountered. We will assess the successes and challenges that have emerged in Belizean AHM over the past two decades, including the lessons learned during the COVID-19 pandemic. Our dataset primarily comprises qualitative information, such as oral and documentary histories from Belizean and foreign scholars and managers, official guidelines, policies, and legislation, institutional data where available, and our combined experiences with AHM in Belize, Mexico, Guatemala, Honduras, Nicaragua, and beyond.

Pezzarossi, Guido (Syracuse University) and Paige Emerson (Syracuse University)

[26]

Technologies of Surveillance, Technologies of Care? Colonial Census, Biopolitics, and Networks of Surveillance in Southern Guatemala

Technologies of surveillance are a common element of diverse forms of extractive early modern colonial projects as a method of effectively extracting value from humans/nonhumans. The forms surveillance takes vary widely, frequently blurring into technologies of “care” for laboring bodies to ensure their continued productivity. Theories of bio/necropolitics highlight these intersections between surveillance and care in the exploitation of (re)producing bodies, or what Berlant’s “slow death” frames as the management of the “physical wearing out of a population.” *Padrones* (census documents) emerge as one of the more effective technologies of such dispersed surveillance and care in colonial Guatemala, as they tracked the number and location of tribute paying individuals in the region’s native communities, including last known sightings and probable whereabouts of those missing/escaped from where they “belonged.” These documents also reveal a form of paternalistic “care” recording bodily health, injuries, births/deaths, and wayward spouses as part of managing the wear of colonial extraction on native bodies and communities. Through archival, GIS, and social network analysis, this paper materializes these ephemeral early modern colonial technologies of surveillance and looks to bridge the premodern/modern divide in studies of surveillance by highlighting the persisting coloniality of surveillance/care in Guatemala’s contemporary/recent past.

Pezzarossi, Guido (Syracuse University)

[209]

Discussant

Pezzopane, Silvio [310] see Allen, Mitchell

Pfannkuche, Sara and George Vassilatos (Illinois State Archaeological Survey)**[137]***Curating Donations: Ethical Curation of Pesky Collections*

Archaeological objects are frequently donated by private citizens to professional organizations. These include the legacy collections of professional or avocational archaeologists, many of which date to the period when the profession of archaeology was being formalized, and objects found in the attic of a grandparent's house. These collections range from well-documented to completely unprovenanced. Archaeological repositories can provide a permanent home for these materials, but curators must strive to develop robust protocols for cataloguing and caring for donated collections if they are to be better off than they were in private hands. This presentation will look at how the Illinois State Archaeological Survey (ISAS) cares for donations to ensure the accessibility of these collections for consultation, research, and outreach. This presentation will cover how donations are housed across a variety of Midwest archaeological repositories for comparison before discussing the ethical care of donations in ISAS's repository specifically. Topics raised will include establishing donation protocols that fit your institution's resources, how to handle legacy donations, and increasing the value of donations through data sharing.

Pfeiffer, John [92] see Leslie, David

Pfeiffer Jakob, Marco [13] see Ikehara Tsukayama, Hugo

Philippe Bearez, Elise [259] see Jiménez Cano, Nayeli

Phillips, Amy (Draper Natural History Museum, St. Cloud State University), Avery Shawler (University of California, Berkeley) and Chloe Winkler (Draper Natural History Museum, Buffalo Bill Center)**[200]***What Faunal Remains from Wolf Scat in the Greater Yellowstone Ecosystem Can Tell Us about Canid Presence in the Past*

The authors analyzed scat collected from gray wolf (*Canis lupus*) packs in the Greater Yellowstone Ecosystem from 2019 to 2021. Faunal remains in the scat were identified to element, using comparative collections from the Draper Museum of Natural History, and assessed for surface modification and abrasion. This information was supplemented by species identification provided by guard hairs identified using a compound microscope. The results provide information on the taphonomic signature of wolves which is of use in assessing zooarchaeological assemblages. The feeding behavior of wild wolves, as inferred from faunal remains, can be used to identify canids at human occupation sites where no canid bones are present. Differences found between faunal assemblages from wild wolves and domestic dogs could provide insight into the formation of sites and when canids were present at the site. This in turn can provide insights into the process of domestication. For example, wild wolves are unlikely to have been present at human occupation sites when they were in use. Canids in the process of domestication likely inhabited sites concurrently with humans, but their taphonomic signature would reflect a more diverse diet than domestic dogs, which depend largely on humans for their food.

Phillips, Bruce, Erik Steinbach (Logan Simpson), Travis Cureton (Logan Simpson) and Craig Fertelmes (Logan Simpson)**[281]***Evolving Hohokam Irrigation Strategies at La Plaza: A Multidisciplinary Approach*

Hohokam irrigation canals were first excavated in the lower Salt River Valley in the early Pioneer period (AD 1–700), possibly as early as AD 200 at Las Acequias in east Tempe. In the area, substantial expansion occurred in the Sedentary period (AD 900–1150) and continued into the Classic period (AD 1150–1450).

During this time, Canal Tempe was a large main canal serving the site of La Plaza, now beneath central Tempe. The canal primarily irrigated land on an ancient terrace overlooking the Holocene floodplain. In recent excavations on the Arizona State University campus, the main canal was expected but not found. Rather, two relatively large main/distribution canals were discovered on the adjacent floodplain. Multiple analyses were conducted and data synthesized, showing that the larger canal (Feature 9) appeared to carry large volumes of water mostly during the springtime; low-velocity flows were rare. In contrast, the final channel of the smaller canal (Feature 12) may have carried water year-round. This suggests a major change in water intake and distribution strategy late in the Hohokam occupation.

Phipps, Elena

[146]

Discussant

Phuong Thuy, Vo Thi [289] see Macrae, Scott

Phuong Thuy, Vo Thi [289] see Menkina, Ekaterina

Pierce, Daniel (Missouri State University) and Brandon Ives (Missouri State University)
[42]

A Multi-method Analysis of Ceramic Production at Precolumbian Peñitas, Nayarit

Located along the Rio San Pedro in west central Nayarit, Mexico, the site of Peñitas was an important precolumbian center with at least two major occupational eras, achieving its greatest prominence during the Early/Middle Postclassic period as a major center within the Aztatlán Tradition. While few sites along the coastal plain have received detailed analyses of their ceramic assemblages, Peñitas is one exception. In the 1950s and 1960s, UCLA archaeologist Jacques Bordaz examined not only kilns, but also used the seriation of ceramic types to trace diachronic patterns of ceramic production and use at Peñitas. Using Bordaz's work as a starting point, this study uses a multi-method approach to better understand ceramic production at Peñitas. Namely, neutron activation analysis as well as ceramic petrography are used to address differences in production techniques as well as variation in the raw materials used. This study has wider implications as previous research has suggested widespread trading of Aztatlán ceramics within the coastal plain. This study demonstrates that this may not be the case. Furthermore, differences in production within the Peñitas assemblage identified through petrographic study may also indicate distinct potter traditions within the site over time.

Pierce, Daniel [118] see Navas-Méndez, Ana

Pierce, Daniel [255] see Schortman, Edward

Piezonka, Henny [151] see Windle, Morgan

Pigiére, Fabienne [334] see Buckley, Michael

Pigott, Michelle (Tulane University)

[82]

Reconsidering the Impacts of Late Mississippian Chiefdoms on Early Spanish Entradas: A View from Western North Carolina

The Late Mississippian world was populated with several chiefly polities competing for regional dominance in a constantly shifting sociopolitical landscape. In the mid-sixteenth century, two Spanish entradas, led by Hernando de Soto and Juan Pardo, would become entangled in this competitive landscape, attempting to bring late medieval European sociopolitical worldviews into an Indigenous American system. The Soto and

Pardo expeditions have often been characterized by scholars as a particularly disruptive series of events which altered the trajectory of Indigenous history. This paper instead explores how Indigenous leaders accepted the appearance of Europeans in the Mississippian world and recenters Native perspectives concerning the events of the sixteenth century. Using the Late Mississippian landscape of western North Carolina as an example, this paper reconsiders the impacts of these encounters, not as an early destructive colonial event, but rather a series of interactions that would enable Native leaders to reorganize and assert their political power and prestige through their interaction with Soto and Pardo. This paper uses archaeological evidence, including radiocarbon dating, to challenge early Spanish texts and to destabilize the European historical narrative of the sixteenth-century Southeast, demonstrating the power of Indigenous political systems within early contact studies.

Pihlaja, Emily [285] see Griffin, Delancey

Pilaar Birch, Suzanne (University of Georgia)

[280]

Moderator

[234]

Discussant

Pilaar Birch, Suzanne (University of Georgia)

[249]

Neolithic to Bronze Age Human Impact on Island Landscapes and Faunal Communities: Exploring the Wild/Domestic Dichotomy

This paper synthesizes zooarchaeological and stable isotope evidence from the eastern and western Mediterranean to consider the influence of humans on island landscapes and ecosystems from the earliest Neolithic through the Bronze Age. How did the importation of new faunal species, whether domestic or wild, affect the extant endemic island communities? While the Neolithic is often regarded as a critical time of species introductions, it is likely that reintroductions also took place later in time in order to sustain or bolster island populations. To what extent were wild, non-endemic taxa managed by communities, and did these strategies overlap with those for domestic livestock management? Additionally, what role did marine resources play in the diet of island communities, and how did this change through time with concomitant changes in terrestrial faunal assemblages? Did mainland farmers adapt to island ecology by supplementing domestic food production with wild and marine resources, and if so, are there identifiable patterns in transitions? The combination of faunal analysis and multi-isotope studies has the potential to provide new insight into the nature of human-animal interactions on Mediterranean islands during the first half of the Holocene.

Pilaar Birch, Suzanne [319] see Veres, Matthew

Pilaar Birch, Suzanne [334] see Yalcin, Tugce

Pinhasi, Ron [247] see Gelabert, Pere

Piñon, Joel [183] see Thornton, Erin

Pinta, Elie (Arizona State University; University of Stavanger)

[307]

Discussant

[307]

Chair

Pinta, Elie (Arizona State University; University of Stavanger), Birgitta Wallace (Parks Canada (Retired)) and Kevin Jenkins (Parks Canada)

[307]

Untold Stories from L'Anse aux Meadows: Highlights from the Wooden Collections

L'Anse aux Meadows, a UNESCO World Heritage Site and the first European settlement in North America, is located in the northernmost part of modern-day Newfoundland, Canada. During the eleventh century, Norse Greenlanders established a frontier site for short periods of time, a “gateway to resources” further to the south. During the archaeological investigations at L'Anse aux Meadows by Parks Canada in the 1970s, large quantities of worked wood were discovered. While only a handful of artifacts were identified, most of the collection consists of leftovers from woodworking activities, as well as unworked twigs and branches. In the last decade in particular, small finds, construction timbers, and boat parts excavated in other Norse settlements across the North Atlantic have started to get the attention they deserve. However, the numerous woodchips and twigs are still too frequently left aside. At L'Anse aux Meadows, this material is common and has the best potential for digging into past woodworking strategies. In this presentation, I highlight the previous research done on the wooden collections from L'Anse aux Meadows and trace a path for future work.

Pintar, Elizabeth (Gatekeeper's Museum, Marion Steinbach Basket Museum, Tahoe City, CA) and Jorge Martínez (ARQAND [Grupo de Investigación en Arqueología Andina])

[306]

Dart Points and Chusquea Shafts in the Argentine South Puna

This presentation focuses on the use of the atlatl and dart system since the earliest known occupations in the Salt Puna of NW Argentina ca. 9800–7000 BP, specifically in the region of Antofagasta de la Sierra (Catamarca). Within this study area, we examine various metrics of lithic projectile points together with very well-preserved shaft fragments found in cave and rockshelter contexts located above 3,500 masl. These shafts were made from *Chusquea lorentziana* canes and *Salix humboldtiana* rods, both allochthonous resources from the eastern lowland ecoregions. These fragments include proximal and distal ends of foreshafts and proximal ends of dart mainshafts that bear a dimple—a telltale sign of dart use. A possible atlatl hook made of onyx (Cueva Salamanca I site) and split feathers of aquatic birds, used to make dart deflectors (Peñas de la Cruz I site), lend further support to the early use of this weapon system. Comparisons will be made with other archaeological finds in the Puna region at large and with neighboring regions. We will also investigate the use of darts during the Altithermal (7500–6000 BP) to understand the relationship between climate, environment, animal behavior, mobility, and the subsistence of these early hunter-gatherer groups.

Pinto Lima, Helena (Museu Paraense Emílio Goeldi, Brazil), Bruno Moraes (Earth Analytic Inc., Santa Fe, New Mexico), Wetherbee Dorshow (University of New Mexico, Albuquerque) and Michael Heckenberger (University of Florida)

[54]

Collaborative Curation of Kuikuro Collections: The AIKAX Portal

This paper describes the development and implementation of the AIKAX Portal, a digital database that consolidates the data of more than three decades of ethnographic and archaeological research and collections among the Kuikuro indigenous people of the Upper Xingu. The Xingu Indigenous Territory (TIX) encompasses 20,000 km² in the southern portion of Amazonia in the Brazilian state of Mato Grosso. As part of the Kuikuro Ethnoarchaeological Project of the Upper Xingu, we have been conducting participatory mapping of cultural heritage and interdisciplinary archaeological research in this region in collaboration with the Kuikuro people. It is the longest-running collaborative research project with Indigenous peoples in Brazil and is considered a reference in this field. The AIKAX Portal arose from the need to integrate, make accessible, and return to Indigenous peoples research data scattered across various institutions and frequently inaccessible to Indigenous peoples, who are the primary owners of these collections. This is a direct requirement of the Kuikuro. The database and its derivatives—catalogues and story maps—serve as a shared resource for the online socialization of Kuikuro's culture if they so choose.

Pinzón, Flory (Museo del Deporte), Takeshi Inomata (University of Arizona) and Daniela Triadan (University of Arizona)

[125]

Ceramics of the Middle Usumacinta Region: Relationships over Time

Since the beginning of the Middle Usumacinta Archaeological Project, researchers have observed that ceramics from several archaeological sites in the region share similarities with those from the site of Ceibal, located in Petén, Guatemala. After conducting several years of research at sites in the Middle Usumacinta region, including Aguada Fénix, the peripheries of Aguada Fénix, El Tiradero, La Carmelita, La Orilla de Laguna Naranjito, Buenavista, Pajonal, El Codo, and Rancho Zaragoza, we have identified several ceramic types dating from the Middle Preclassic: 1000–350 BC to the Terminal Classic: AD 810–950. Among all the archaeological sites investigated so far, the importance of Aguada Fénix stands out. At this site, we have recovered ceramics that have been dated to 1000 BC at Ceibal, but in Aguada Fénix it seems to be even earlier. Each of the investigated sites also features ceramics characteristic of the Middle Usumacinta region, showing important relationships among them through time. We have also identified Olmec ceramics at some sites. These results provide important data on the cultural process of the region and represent a very significant analysis with more than 95,326 ceramic fragments.

Piper, Stephanie [147] see Needham, Andy

Piperno, Dolores (Smithsonian National Museum of Natural History)

[222]

Richard Cooke: Archaeologist, Colleague, and Friend Extraordinaire

This paper discusses Richard Cooke's career in the context of my professional and personal relationships with him. Over a more than 40-year period beginning with my first trip to Panama in 1979 as a graduate student I enjoyed the benefits of his enormous knowledge, support of my career, friendship, and ability to promote a congenial and productive workplace. I will review the work we did together at Panamanian archaeological sites, as well as some of his many other noteworthy achievements in Latin American archaeology.

Piperno, Dolores [217] see Prufer, Keith

Pisanelli, Brenna (Heritage Consultants LLC), Cory Atkinson (Connecticut State Historic Preservation Office) and David Leslie (Heritage Consultants LLC; TerraSearch Geophysical LLC)

[224]

An Exploration of Late-Terminal Archaic Domestic Architecture and Settlement Patterns in Southern Connecticut

Archaeological investigations have resulted in evidence that suggests a shift in settlement patterns occurred in Connecticut during the Late and Terminal Archaic periods from interior wetlands to large river drainages. While sites dating to the Late Archaic period are common throughout the New England region, the archaeological record concerning settlement patterns, occupational duration, and domestic architecture remains lacking. Archaeological data collected between 2021 and 2022 from the Tenmile River Native American Site, in Cheshire, Connecticut, provided compelling evidence for a large, round domestic dwelling structure likely dating to the Atlantic Phase of the Terminal Archaic period. This paper aims to explore Late and Terminal Archaic architecture, and how understanding the types and sizes of domestic dwellings as they relate to seasonal and longer-term occupations, may provide insight into shifts in technology and lifeways during these time periods.

Pisanelli, Brenna [183] see Seminario, Linda

Pitblado, Bonnie (University of Oklahoma)**[64]***Discussant*

Pitblado, Bonnie [254] see Palacios, Horvey

Pitts, Michael [52] see Friend, Tara

Pizá Chávez, Abiud [158] see Meinecke, Helena

Place, Noah**[69]***Disease Ecology of Human Treponematoses in the Southwest US/Northwest Mexico*

Human treponemal diseases (yaws, endemic syphilis, and venereal syphilis) have a long and storied past in the North American Desert West, with the earliest case dating back roughly 1,500 years. The identification of lesions associated with treponemal disease at two Cienega phase (400 BCE–50 CE) sites in southern Arizona and northern Sonora, however, move the presence of these diseases back at least 500 years. This period represents a unique stage in the development of southwestern societies, as settlement sizes began to grow and maize cultivation intensified. While the number of identifiable cases appears low, the presence of infectious disease in these growing settlements provides important information to understanding the disease ecology of these pathogens in the Desert West. The lack of identifiable infectious diseases before the Cienega phase indicates that settlements were beginning to reach population densities large enough to facilitate the spread of disease by skin-to-skin contact. ***This poster will contain illustrations of human remains.

Planto, Rebekah (College of William and Mary)**[325]***Chair***Planto, Rebekah (College of William and Mary)****[325]***Matters of Scale: Depositional Processes and the Archaeology of Daily Life at Bacon's Castle*

Home to Virginia's oldest standing house, the Bacon's Castle site is the most visible remnant of a (post)colonial landscape, continuously occupied as such since at least the 1640s. The extant portion alone, where archaeology has concentrated, has been inhabited over multiple generations by a complex community of bound laborers, tenants, sharecroppers, as well as the plantation's owners. Previous archaeological projects have identified features, established chronologies, and yielded a vast legacy collection. Yet, high levels of stratigraphic disturbance, and the ephemerality of the material record before ca. 1680–1700, combined with the narrow scope of most CRM projects, have conspired to leave much of the vast legacy collection unanalyzed and uncontextualized. Through an intrasite comparative analysis of several artifact assemblages recovered over the past 40+ years, I explore evidence of both gradual, cumulative processes of quotidian activities, and abrupt depositional episodes relating to specific events. Findings facilitate reimagining the colonial landscape not only as an expression of its owners' ideology and power, but as a populated space and a multivocal product of the negotiated pluralism and rising structural inequality that reshaped the Chesapeake over the last half of the seventeenth century.

Plata Aguilera, Olganydia (Columbia University) and Erin Pugh (Barnard College)**[84]***Settler Colonialism in the Picuris Watershed*

This paper tracks the relationship between Picuris Pueblo and San Antonio del Embudo, a settlement in the Picuris homeland downstream of the Rio Pueblo. Embudo (now known as Dixon) is the product of two colonial regimes, beginning with the Spanish appropriation of the lower Picuris watershed to create the Embudo Land Grant in 1725, followed by settlement's annexation by United States, following the 1848 signing of the Treaty of Guadalupe Hidalgo. Archival evidence dating to the declaration of the land grant, the defensive architecture of the central plaza, distributions of ceramic types from midden fill, and local ethnohistories all point to a stronger relationship between Embudo and the Tewa pueblos, despite the closer proximity of Picuris. This paper also considers the impact of US colonialism on both Embudo and Picuris, particularly following the construction of the railroad, the introduction of wage labor, and the growing presence of Anglo settlers in the watershed. While offering an archaeology of conquest, expropriation, and occupation in the Picuris homeland under Spanish and US settler colonialism, this paper also highlight the depth of cultural exchange that has occurred.

Platt, Sarah (College of Charleston)

[142]

Moderator

[89]

Chair

Platt, Sarah (College of Charleston)

[89]

Archaeologies of Legacy: Southern Memory and the Archaeological Archive at 87 Church Street, Charleston
87 Church Street, now known as the Heyward-Washington House, is one of the most extensively excavated sites in downtown Charleston, South Carolina, representing a cross-section of urban life spanning the earliest decades of the eighteenth century to its reimagining as a historic house museum in 1929 on the leading edge of the historic preservation movement in the city. Most of the excavated material now forms the basis of an expansive legacy collection, produced by Dr. Elaine Herold in the 1970s whose long career appears in flashes throughout the Midwest and eastern United States during the latter half of the twentieth century. The collections she generated represents the complex entanglement of curatorial practice, social memory, and interpretation in the production of the archaeological archive. Particularly profound are the impacts of Lost Cause perceptions of the Southern past on understandings of this site that are prevalent in Charleston during the initial period in which these collections were produced. Following the lead of historians, this paper considers the formation processes of the 87 Church Street archive, and how the taphonomy of memory impacts our interpretation and understanding of this collection.

Plattner, Alain [175] see Semon, Anna

Plavšić, Senka [247] see Kuhn, Steven

Plaza, María Teresa [178] see Garrido, Francisco

Plekhov, Daniel (Portland State University)

[328]

Effects of Rainfall Patterns on the Distribution and Prevalence of Earthen Terraces

Earthen agricultural terraces are prevalent worldwide and have continued to be built and used for millennia. Yet relative to their stone-faced counterparts, earthen terraces are often characterized as less intensive and productive, requiring less time, labor, and material resources to construct and maintain and likewise producing lower yields. While the validity of these claims necessarily varies and depends on the specific

characteristics of any context, the general question of why farmers may invest in earthen rather than stone terraces remains pertinent, as much for the present as for the past. Aside from time, labor, and material costs, environmental considerations are essential to consider, particularly with respect to water availability. Looking at annual rainfall patterns, this paper draws on Donkin's 1979 catalogue of agricultural terracing in the Americas to investigate how rainfall quantity and seasonality relate to the distribution and prevalence of earthen terraces. While rainfall quantity is essential for agriculture in general, I predict that the seasonality of rainfall leads to structural considerations that help determine whether earthen or stone-faced terraces are more suitable for certain environments. This work is conducted in Google Earth Engine and shows the potential of cloud-based geospatial platforms for conducting large-scale comparative environmental studies.

Pleuger, Sarah [151] see Égüez, Natalia

Pluckhahn, Thomas (University South Florida), Kendal Jackson (University of South Florida), Jaime Rogers (University of South Florida), Victor Thompson (University of Georgia) and Carey Garland (University of Georgia)
[232]

Firefly Synchronicity in Platform Mound Building by Indigenous Peoples of the Florida Peninsula, USA

Although archaeologists commonly situate the value of our field in its capacity to identify broad-scale patterning in human societies over the long term, critiques of the essentialism and linearity of social evolution led many to abandon this goal in favor of shorter-term, local histories. Drawing from calls for a “process archaeology” that recognizes continuous change or becoming, and its application to complex societies, we use firefly synchronicity as a framework for understanding patterning in the timing of the construction of platform mounds by Indigenous peoples of Tampa Bay, on the western coast of the Florida peninsula, USA. Archaeologists now recognize that Indigenous peoples of eastern North America began constructing platform mounds earlier than commonly been accepted, yet early platform mounds are often interpreted as having little regularity in form, timing, or location. Bayesian modeling of radiocarbon dates and isotopic studies of oyster (*C. virginica*) shells from three sites in Tampa Bay reveals rhythmic coordination in the construction of platform mounds across the first millennium CE.

Plug, Jo-Hannah [25] see Croucher, Karina

Plumlee, R. Scott (Gila River Indian Community, Cultural Resource Management Program)
[96]

Evidence for Land Tenure and the Creation of Commons among the Virgin Branch Ancestral Puebloans

The Cultural Resource Management Program of the Gila River Indian Community recently surveyed over 4,000 acres of Kaibab Paiute tribal lands in northern Arizona, recording over 85 archaeological sites. The survey examined broad basins and small hills, in areas of relatively low slope, but bordered by the Vermillion Cliffs. Most of the newly recorded archaeological sites are associated with the Virgin Branch Ancestral Puebloan culture and the Pueblo II period (900–1150 CE). This effort recorded a pattern of artifact deposition that suggests that habitations were culturally excluded from a portion of the landscape. I hypothesize that this exclusion was related to cultural ideas about the control of Commons, and that habitations represented a claim on surrounding land and/or resources. This hypothesis is supported by evidence for dispersed, seasonal, single-room habitations in other parts of the project area. These habitations are spaced along low ridges, suggesting that each denoted a “territory” or area of “control.” I propose a model where a habitation structure represents a land claim, and where habitations are therefore barred in and around certain resources, such as lithic material sources and springs.

Pluskowski, Aleks (University of Reading, UK), Guillermo García-Contreras (University of Granada), Michelle Alexander (University of York) and Rowena Banerjea (University of Reading)

[22]

Landscapes of (Re)Conquest: Archaeologies of Cultural Transformation in Medieval Iberia and Occitania

This paper presents the highlights of the “Landscapes of (Re)Conquest” project (2018–2023), which has investigated the impact of conquest, migration, and cultural transformation in the frontier societies of medieval Iberia and Pyrenean Occitania. Focusing on specific regional case studies, it considers how the creation of frontier societies resulting from variable episodes of conquest and regime change resulted in both continuities and discontinuities in the cultural landscape. This is visible in long-term trends associated with centers of authority, urbanism, rural settlements, religious infrastructure, and the exploitation of natural resources. It also considers examples of resilience following conquest, regime change, and migration, particularly foodways connected with ethno-religious identities, ceramic production and use, architecture, and construction.

Pluskowski, Aleks (University of Reading, UK)

[245]

Discussant

Pochon, Anaïs (Sorbonne Université)

[279]

The Ethnohistoric Narratives Confronted to the Archaeological Reality: A Case Study from the Mississippian Sites of Cahokia, Moundville, and Spiro

During the French colonization, Louisiana and the Mississippi Valley in general were the background of a quantity of testimonies about Native American societies that were met at the time by the French explorers. A few of these Frenchmen had lived among Native American societies for a various amount of time, the most noticeable example being probably Antoine-Simon Le Page du Pratz, who lived among the Natchez society. While he was close to the Sun elite, he wrote *Histoire de la Louisiane française* [History of French Louisiana], and he was particularly interested in describing the funerary ceremonies he witnessed. In particular, his description of the funerals of the Natchez elite gives us an interpretive perspective of archaeological vestiges, especially concerning the Mississippian cultures. Through the study of three examples from Cahokia, Moundville, and Spiro sites, we will try an analysis of the archaeological materials related to the ethnohistoric documents. In which instances do the colonial and ethnographic documents assist us to apprehend archaeological remains? What are the limitations of such an interpretation? This methodology has given relevant results in interpreting Mesoamerican and Andean vestiges in the past decades.

Podzimek, Faithleigh (University of Nebraska, Lincoln), Ben Kreimer (Emerging Media Consulting LLC) and Phil Geib (University of Nebraska, Lincoln)

[244]

3D Documentation of a Basketmaker Petroglyph Panel in Southeastern Utah

Our research involves creating and analyzing a 3D model of an inaccessible petroglyph panel in southeastern Utah. The rock art panel occupies the cliff face of an alcove approximately 10–30 m above the modern ground surface. Such heights make documentation difficult; this lofty position likely caused the initial archaeologists who recorded the alcove in 1961 to miss the panel. The development of photogrammetry and drone technology provided an effective way to overcome the challenge of inaccessibility. A drone systematically captured over 1,300 partially overlapping high-resolution images of the cliff face, including a few measured control points. These images were then “stitched” together using digital software (RealityCapture) to generate a 3D model of the cliff face and petroglyphs. This model allows observers to view the panel comprehensively without visiting the field and to export 2D images of the cliff face as needed. Much of the imagery appears to derive from the Basketmaker II period (~400 BC–AD 400); earlier elements are also present. Generating a permanent record of an inaccessible petroglyph panel using a noninvasive and efficient method meets the objective of both heritage management and archaeological research. This approach has wider applicability in other archaeological contexts.

Podzimek, Faithleigh [337] see Geib, Phil

Pohl, John (Cal State LA), Jeremy Coltman (University of California, Riverside) and Danny Zborover (British Museum)

[252]

In the Many Realms of John Pohl: An Introduction to a Double Symposium

This double symposium brings together a select group of archaeologists, ethnohistorians, museum professionals, and social justice advocates who have either collaborated with John M. D. Pohl directly or took inspiration from his remarkable half-century career. A trailblazer in the study of Mixtec, Nahuatl, and Zapotec civilizations of southern Mexico, Dr. Pohl is equally noted for bringing the ancient Indigenous past of the Americas to life through his numerous publications, collaborative field research, codical studies, blockbuster exhibitions, film and media production, dazzling artwork, and not least his inspired teaching at various universities across the United States. The panels are organized around two fundamental areas that reflect John Pohl's interdisciplinary endeavors, the first in scholarship and the second in media and advocacy. The speakers are both current and former students together with emerging and senior scholars who are currently engaged in innovative research ranging from investigations into the Classic, Postclassic, and colonial cultural transformations across Mexico, Guatemala, and the United States; the use of cutting-edge technologies in the field and lab; digital media in museums and architectural reconstructions; and Indigenous representation in the public interpretation of their cultural histories.

Pohl, John (Cal State LA)

[302]

Discussant

Pohl, John [302] see Monaghan, Lee Ann

Pohl, John [302] see Zborover, Danny

Pohl, Mary (Florida State University)

[302]

Discussant

Poister, Nicholas (University of New Mexico), Steve Baumann (National Park Service) and Richard Greene (SWCA Environmental Consultants)

[221]

Rare and Isolated Artifact Occurrences from the Caves of the El Malpais Lava Fields of New Mexico

After more than a century of sustained looting, the lava tube caves of El Malpais have lost volumes from what was once an unparalleled record of cave use by Ancestral Pueblo people. Occasionally, artifacts stolen from the caves appear on public auction blocks, offering a brief glimpse of what used to be. In general, archaeologists seeking an understanding of the nature of ancient subterranean practices are left with the few materials overlooked by pothunters. Rare and isolated artifact occurrences in caves today may reflect greater frequencies in the past, and through interpretation of such items, we may open a window on past chthonic activities, both ceremonial and pragmatic. These items often have ethnographically described functions or analogs from surface contexts, which serve as invaluable aids to decipherment. Certain cave features are also unique. For example, only a single instance of parietal art is known from a cave dark zone at El Malpais. Nonetheless, this panel holds precious clues to Ancestral Pueblo beliefs concerning caves. In an exciting development, recent Park Service consultation with neighboring Pueblos has led to the disclosure of previously confidential information pertaining to artifacts cached in caves.

Polanyi, Tamas (Sandbox Archaeology) and Shelby Manney (Arizona Army National Guard)
[207]

The Potentials of Airborne Geomagnetic Survey Systems for Cultural Resources Management: Preliminary Results of Experimental Geophysical Investigations in Eastern Hungary and Central Arizona, USA

Simultaneous innovations in unmanned aerial vehicles (UAVs) and geophysical technologies present the possibility of a potentially groundbreaking approach to archaeological geophysics: airborne geophysical survey. As part of an ongoing effort on behalf of the Environmental Management Office of the Arizona Army National Guard to integrate conventional and remote sensing survey methods for cultural resources management, we conducted an exploratory project to assess the applicability of aerial geophysics for archaeological site detection and mapping. Using the Sensys MagDrone R4 survey system, we conducted large-scale surveys of two complex archaeological sites, a fortified Late Bronze Age settlement in eastern Hungary and an early Sedentary period Hohokam village site in the northern portion of the Florence Military Reservation in Pinal County, Arizona. In this paper we present our preliminary findings from multiple geophysical survey campaigns. We evaluated the airborne geophysical survey results in light of preceding pedestrian geophysical and conventional surveys. We also present a novel data processing approach using computational methods for the detection and classification of archaeologically relevant magnetic anomalies.

Polet, Caroline [37] see Lemaitre, Serge

Polk, Sara and Jeremy Wilson (Indiana University, Indianapolis)
[61]

Monumental Memories: Addressing the Association between Fort Ancient Villages and Woodland Earthen Monuments
Since early archaeological investigations in the Ohio River Valley, scholars have speculated on the relationship between late precontact Fort Ancient villages and earlier Woodland mounds and earthworks. However, few have empirically addressed the association between these sites and their placement on a persistent landscape. We seek to determine the association between Fort Ancient villages and earlier earthen monuments both broadly and by Fort Ancient temporal component and subregion. In doing so, we employ archaeological site modeling through geographic information systems (GIS) considering parameters including soil type, distance to rivers, and slope to test settlement patterns against environmental conditions in comparison to earthen monument locations. In addition, we utilize aggregated site data to quantitatively evaluate and provide a nuanced exploration of community settlement during the Fort Ancient period. These methods coupled with an analysis of Fort Ancient village site layouts incorporating Woodland mounds illuminate the association between Fort Ancient communities and Woodland earthen monuments. Our findings contribute to the recognition of persistent landscapes and social memory in the Ohio River Valley and advance our collective knowledge regarding site formation processes in the region.

Polk, Sara [101] see Lierenz, Julie

Pollack, David (Kentucky Archaeological Survey)
[272]

Chair

Pollack, David (Kentucky Archaeological Survey) and A. Gwynn Henderson (Kentucky Archaeological Survey)
[272]

Seventeenth-Century Fort Ancient Mortuary Practices and Ritual Space

The 2023 investigation of the seventeenth-century Fort Ancient village of Augusta, Kentucky, focused on a section of the community's cemetery and ritual space. It was conducted in advance of planned improvements to the historic town of Augusta's sewage treatment system. Although six extended adult burials were documented within an 80 m² excavation block, the significance of this research lies in the documentation of

features reflecting ritual activities that would have taken place near each grave. These features included large, individual rock-chinked poles, intensely fired hearths, evidence for ritual feasting, the intentional breakage of ceramic vessels, possible grave structures, and clay lined grave shafts. These characteristics are similar to those documented at the contemporary Fort Ancient villages of Hardin and Larkin, and at the later lower Shawnee Town, an eighteenth-century village located upstream from Augusta. Significantly, these features are described in ethnohistoric and historic documents as elements of Shawnee mortuary practices. These investigations suggest that there are strong links between precontact Fort Ancient groups of the middle Ohio valley and historic Shawnee people.

Pollard, Helen (Michigan State University) and Dorothy Washburn (Independent)
[255]

Monitoring Cultural Change through Ceramics: A Data Comparison from Typology, Sourcing of Pastes, and Symmetry Analysis of Ceramics from the Prehispanic Tarascan Region

As a common material and highly plastic technology, in Mesoamerica ceramics are used to define spatial and chronological units of past social, political, and economic structures. In the present study, we compare (1) the use of the type-variety classification as a *chaîne opératoire*, (2) the use of INA and thin-section petrography in sourcing ceramic pastes, and (3) symmetry analysis of the design structure of ceramics. The samples come from central and northern Michoacán from the Late Preclassic to the Late Postclassic periods (200 BCE–CE 1522), primarily from sites in the Lake Pátzcuaro and Zacapu Basins. The goal will be to determine how each method monitors the timing and rate of sociocultural stability and change and to propose what kinds of social processes each method is able to document.

Pollock, Erik [337] see Samuelsen, John

Polun, Sean [283] see Ferguson, Jeffrey

Ponce, Jocelyne (Tulane University)
[314]

Social Inequality and Cohesion through Rural-Urban Feasts at the Lowland Maya site of La Corona

Lowland Maya feasts were critical for communal cohesion but also marked social distinctions among participants through differential display of status symbols and contributions. For these reasons they provide important insight on patterns of socioeconomic inequality and integration. In this paper I present material analyses data from Late Classic period (AD 250–900) feasting deposits to discern patterns of socioeconomic inequality across the settlement density continuum. I specifically discuss data from settlement clusters that likely represented neighborhoods in rural, peri-urban, and urban settlement density zones in the La Corona region in northwest Petén, Guatemala. While commensal events were critical in community formation and identity building, they also played a pivotal role in marking internal distinctions in neighborhoods.

Ponce, Jocelyne [159] see Canuto, Marcello

Ponciano Diaz, Daniel (University of Florida) and Gabriel Prieto (University of Florida)
[259]

The “X”-Ray Files: Preliminary Results on the Identification of Shark Species Using X-Ray Technology and Its Implications for a Better Understanding of the Economic and Symbolic Role Played by Sharks in Prehispanic Andean Societies

Shark fisheries were an important economic activity carried out by small-scale maritime communities in the prehispanic Andean coast since at least the second millennium BC. New evidence found in Huanchaco, north coast of Peru, suggests that during the fifth and seventh centuries of our era, sharks became an essential

source of proteins in the daily diet and a powerful symbol in their ceremonial practices. Complete sharks have been found in votive offerings buried in the temples, and selected shark teeth have been recovered in the burials of powerful fisher-chiefs. Although shark teeth allow accurate identification of shark species, they are not always present in archaeological contexts. Calcified vertebrae are found in abundance throughout fishing sites on the north coast of Peru; however, they are more challenging to identify due to their similarities across shark species. In this paper, we present experimental analysis using X-rays on the shark centra from Huanchaco as a potential tool to determine sharks down to family and species. In addition, we discuss the significance and role of sharks within marine ecosystems exploited by coastal populations as well as their cultural significance within prehispanic Andean maritime communities.

Pool, Christopher (University of Kentucky)

[125]

Discussant

Pool, Christopher (University of Kentucky)

[163]

Contemplating Disjoint Change in the Tuxtlas Formative-Classic Transition

Like a schizophrenic Mesoamerican Janus, the first centuries CE in the Tuxtlas region look backward or forward with neck-snapping deviation depending on where, when, and at what an observer looks. A millennium-old tradition of differentially fired wares persists in some parts as fine-paste orange wares dominate serving assemblages in others. Hieroglyphic writing and monumental sculpture are embraced or rejected differentially between and within lowland and highland settings. Subregionally distinctive autochthonous and allochthonous architectural layouts are elaborated, modified, and replaced as individuals and collectives jockey to employ tradition, novelty, and extra-regional networks to their advantage. In this paper I reflect on a model of change I proposed in the early 2000s focused on ceramic use and production in the central Tuxtlas from a perspective expanded regionally, empirically, and theoretically by subsequent survey, excavation, analysis, and historical research at Tres Zapotes and in its environs.

Pool, Christopher [216] see Loughlin, Michael

Poole, Anne (University of Washington), Ben Marwick (University of Washington), Setareh Shafizadeh (University of Washington) and Jess Beck (University College Dublin)

[173]

The Changing Job Market in Academic Archaeology: Analysis of a Decade of Data from the Archaeology Academic Jobs Wiki

Tenure-track employment is a highly sought-after career path for many graduate students. Recent surveys have helped to document the supply of applicants in terms of the numbers of graduates per year and per institution. However, the demand for applicants for tenure-track jobs has not been studied in detail. We examine the text of advertisements for tenure-track jobs to get insights into the archaeology academic job market. Using data from the community-edited Archaeology Academic Jobs Wiki, we explore changes in the academic job market over time. We examine the numbers of positions advertised per year and the ratio of tenure-track to untenured positions. We analyze job titles and descriptions to identify trends in topics and methods. We investigate the complexity of the advertisements and instructions to applicants to see how the details of the application have changed over time.

Poole, Meredith (Colonial Williamsburg Foundation)

[16]

"They Are Ours": Bringing Together Past and Present Church through Burial Excavations at the First Baptist Church Site
At the request of the descendant community, Colonial Williamsburg archaeologists in 2022 excavated three burials from among 62 discovered on the site of the First Baptist Church. Despite poor preservation and a

dearth of identifying information, archaeological evidence recovered from these burials speaks clearly to aspects of the lived experience of the interred. Coffin construction, burial clothing, and dietary pollen are among lines of evidence that have contributed valuable details to an emerging picture of this early nineteenth-century congregation. Combined with osteological and DNA analysis, the archaeological evidence has helped to humanize anonymous burials, and to build connections between a living church community and its founding members. ***Images of human remains will be included in this presentation.

Pope, Carly
[118]

Evidence of Exchange in Precolumbian Ceramics from Isla Colon, Bocas del Toro, Panama

Isla Colon, the largest island in the Bocas del Toro archipelago on Panama's northwest coast, has a unique density of archaeological features in the region. Sitio Drago, the largest site yet found on the island, includes ceremonial and settlement mounds and a diverse and sizable assemblage of subsistence remains and cultural materials. Evidence of cultural interactions in the form of lithic tools and possible "prestige goods" were uncovered dating to between AD 750 and 1450. Overall, Sitio Drago has the most diverse ceramic assemblages in the area and was likely tied to overland and maritime exchange networks. Stylistic analysis noted the presence of pottery types from at least five distinct culture areas, ranging from Central Panama to Nicaragua. Ongoing research focuses on data collection and archaeometric analysis to investigate questions of scale, chronology, and cultural practices within these networks. To assess what material was moving across Central America in the past, petrographic and geochemical analyses have been undertaken to determine the provenance of different types of pottery. As several distinct groups of ceramics are evident stylistically as well as compositionally, the sources and amounts of these different kinds of pottery may indicate the underlying relationships between disparate communities.

Porat, Naomi [116] see Bar-Yosef Mayer, Daniella

Porter, Benjamin [85] see Lau, Hannah

Porter, Benjamin [199] see Mogauero, Megan

Porter, Keri (University of Notre Dame), Susan Sheridan (University of Notre Dame) and Anna Osterholtz (Mississippi State University / Cobb Institute)
[211]

Reconstructing Violence: A Multiscalar Approach to Cranial Trauma

When analyzing traumatic injury in highly commingled and fragmentary collections, interpreting violence can be particularly challenging as reconstructing the full extent of fractures in an individual is not possible, and not all traumatic injuries are indicative of violence. In these cases, cranial trauma can be the most suggestive of interpersonal violence in the past; however, highly fragmented skeletal remains can be difficult to incorporate into statistical analyses. This paper proposes a multiscalar analysis using a zonal approach to examine complete crania, complete cranial elements, and specific zones per cranial element to understand trends in the location of trauma to the skull while maximizing sample sizes for statistical analyses. While contributing methodologically to the study of commingled/fragmentary skeletons, multiscalar analyses are also appropriate as they recognize the multiple intersecting identities, both individual and communal, that make up intentionally commingled skeletons. At the Early Bronze Age site of Bab adh-Dhra', this approach was used to better understand patterns of interpersonal violence from the A22 charnel house during the occupation of a densely populated, walled town. Results show that each line of evidence can contribute novel findings for interpreting violence, making their incorporation important for robust understandings of the past.

Porter, Keri [68] see Chorek, Sophie

Porter, Keri [324] see Johnston, Julia

Posey, Jonas [282] see Stoker, Owen

Posselt Santoyo, Emmanuel (Instituto de Geografía, UNAM)

[210]

Movimientos rituales en el sitio de Yucu Ñuu Dahui durante el Clásico en la Mixteca Alta, Oaxaca

La conferencia pasada presenté algunas ideas sobre el estudio del movimiento en los sitios arqueológicos a partir del propio movimiento. Continuando con esta temática, en esta ocasión me enfocaré en la movilidad ritual al interior del sitio de Yucu Ñuu Dahui. Este asentamiento es emblemático de la Mixteca Alta debido a que se considera una gran ciudad del Clásico o la fase Flores (300-900 dC). Gracias a los recorridos arqueológicos y a la fotogrametría realizada con dron (con la que se obtuvieron modelos de elevación, curvas de nivel, ortofoto y modelos 3D del terreno), se observó que el sitio fue, al mismo tiempo, un gran santuario. Debido a su extensión, monumentalidad y a que integra diferentes santuarios, tanto construidos como naturales, lo considero un paisaje sagrado. Los análisis que realicé me permitieron conocer aspectos de la movilidad en el sitio y proponer varios movimientos rituales o peregrinaciones al interior de éste. Asimismo, observar la interconexión y aproximaciones a los diversos santuarios.

Postalwait, Amy [6] see DeMuth, R. Carl

Potra, Adriana [337] see Samuelsen, John

Potter, Bethany (University of Kansas)

[20]

Chair

Potter, Bethany (University of Kansas), Kelly Graf (University of Kansas) and Rolfe Mandel (University of Kansas)

[20]

Lithic Technological and Use-Wear Analysis for Two Paleoindian Sites at the Kanorado Locality, Kansas

This paper presents results of an analysis of lithic artifacts from the Kanorado Locality in the High Plains of Western Kansas. The Kanorado Locality is a stratified Clovis-age and Folsom/Midland occupation along Middle Beaver Creek. The Clovis adaptation in the Great Plains is well-documented, but not as thoroughly understood as subsequent occupations. This paper considers lithic materials from two sites at the locality, 14SN101 and 14SN105. Clovis-age and Folsom/Midland materials and those dating to later cultural periods are contained in distinct buried soils. Therefore, these sites facilitate comparison between Clovis and later Paleoindian components. This project examined each artifact field catalogued as a lithic ($n = 409$) from these two sites and recorded its technological attributes. Any debitage larger than 6 cm² or 5 g, in addition to all tools, were examined for use-wear using low-power microscopy. A dedicated experimental comparative collection was produced for this project and designed to closely reflect the raw materials represented in these two assemblages. Results situate Clovis-age adaptations in local temporal context, by way of comparison with Folsom/Midland and later activities in the same locality. The results of this analysis are also considered in terms of prior Clovis use-wear studies in differing environmental contexts.

Pouncett, John [171] see Werens, Karolina

Powell, Wayne (Brooklyn College, CUNY) and Ryan Mathur (Juniata College)

[121]

Considering Pb Mixing in Lead Isotope Analysis (LIA) of Tin Artifacts

LIA of tin metal must consider the U-Th-Pb characteristics of cassiterite ore. The initial Pb content of cassiterite is <1 ppm and Th is <0.005 ppm. However, it contains as much as 50 ppm U. Therefore, 206 Pb and 207 Pb accumulate over time, potentially allowing the definition of an isochron. However, given the age of most Eurasian tin ores (300–30 Ma) and the relatively low U concentration, little radiogenic Pb is produced. Unusually, U-enriched 300 Ma cassiterite (50 ppm) would generate only 2.5 ppm of Pb, which mixes with the ~0.5 ppm of initial Pb. Thus, every tin LIA is a mixed value. Only one of the 140 LBA European tin ingots contains less than the 3 ppm U limit expected in Variscan ore. Therefore, most tin objects contain an additional Pb source: inclusion of galena or zircon in the ore concentrate; contamination by residual Pb metal in the smelting/casting ceramics; and recycling of tin metal into a new composite object. Accordingly, conducting a detailed mixing analysis is essential to correctly interpret the results of LIA of tin ingots and other artifacts. Here, we present the results of such an analysis on the European ingot assemblage.

Power, Ximena, Claudia Silva (Museo de Historia Natural de Concepción), Rodrigo Díaz-Plá (Centro de Investigación), Valentina Hernández (Independent Researcher) and César Borie (Universidad Católica del Norte)

[119]

Evidence of Seaweed Use by Coastal Communities of the Atacama Desert Coast, South America

Seaweeds have been part of the daily life of coastal populations worldwide. Despite the wide range of species and human uses, seaweeds have been under-researched in the human sciences and historical ecology compared to other marine resources. The archaeological record of seaweed is scarce because of preservation biases and the lack of specific studies. On the Pacific coast of South America, algae macroremains have been recorded in archaeological sites along the Peruvian and Chilean coasts from 14,000 years cal BP onward, although the evidence is scattered and lacks systematization. This work provides a synthesis of the archaeological record of the Atacama Desert to evaluate the long-term uses of these resources for coastal populations. The outstanding preservation conditions of organic remains in this coastal desert provide direct evidence of two genera of kelp-type seaweed (*Lessonia* and *Macrocystis*) in several archaeological contexts. These data suggest the uses of kelp as raw material for cordage, personal objects, mortuary offerings, mummification of human bodies, fuel, and possibly as mortars for architectural purposes. We discuss this evidence with ethnographic data of seaweed uses in the Atacama Desert, to visualize the historical importance of these resources for the coastal populations of South America's Pacific coast.

Power, Ximena

[119]

Chair

Power, Ximena [119] see Zurro, Debora

Powers, Erin [131] see Eberwine, James

Powis, Terry (Kennesaw State University)

[232]

Chair

Powis, Terry (Kennesaw State University), Bryan Moss (Kennesaw State University) and Joey Case (Kennesaw State University)

[232]

The Cummings Site: An Early Woodland Occupation in the Etowah River Valley of North Georgia

Cummings (9BR710) is a multicomponent site with occupations dating from the Late Archaic through the Middle Mississippian periods. It is located about 3 km northwest of the Etowah Indian Mounds in Bartow County, Georgia. The site is situated about 500 m from the Etowah River. Over the past five years

archaeological investigations have focused on the Early Wilbanks Phase (AD 1250–1375) occupation and the site's relationship to Etowah in the thirteenth century. Current research however has identified an Early Woodland component based on the recovery of significant quantities of Dunlap Fabric Impressed pottery. The presence of steatite fragments and Savannah River points may indicate a transitional Late Archaic–Early Woodland manifestation. The occurrence of Cartersville Series ceramic types, including Cartersville Check Stamped and Cartersville Simple Stamped (but no Cartersville Linear Check Stamped) suggests this occupation continued into the Middle Woodland period. Based on the ceramic and lithic artifacts and the presence of pit features, possibly associated with domestic habitation, Cummings likely represents a small settlement, perhaps representing a nuclear family or two, engaged in the harvesting, processing, and storage of forest resources. A comparison of results with other nearby sites and elsewhere in north Georgia will also be provided.

Powis, Terry [83] see King, Adam

Powis, Terry [295] see Mixter, David

Powless, Hollie (Western Michigan University)

[43]

Expanding Archaeological Outreach through Middle-Grade Literature

Though greatly expanded both in quantity and diversity of subject matter in recent years, literature for the middle-grade audience largely fails to include storylines featuring archaeology, particularly evident in graphic novel formats. As archaeology is not a prominent piece of traditional public education, young people may not be exposed to the field until much later in life. This project addresses this lack of archaeological literature for younger audiences by introducing and expanding their knowledge of archaeology in an age-appropriate and inviting way, outside the classroom. Though improving, a significant portion of literature on archaeological sites is intended for an academic audience or older members of the public. To fill this niche, I have written and illustrated a middle-grade graphic novel centering around the historic site of Fort St. Joseph in Niles, Michigan. Set at an archaeology summer camp, this novel brings archaeology to the present while exploring the past.

Prado, Shalen (University of Saskatchewan), Adrienne Lickers Xavier (McMaster University), Andrew Roddick (McMaster University) and Scott Martin (McMaster University)

[87]

Gathering and Growing from Past to Present: Building Future Foodways and Indigenous Landscapes in Turtle Island

How can archaeological data contribute to Indigenous food sovereignty efforts and biocultural restoration of Indigenous landscapes? We present two projects from northern Turtle Island from vastly different ecologies (Saskatchewan and Ontario), where paleoethnobotanical research has been effective for connecting archaeologists, Indigenous scholars, and community members seeking decolonized foodways and revitalized Indigenous landscapes. In the Bridge to Land Water Sky Living Lab in Saskatchewan, paleoethnobotanical, archived ethnographic, and community knowledge are braided together to create a cohesive narrative of First Nations human-plant relationships across time. In the “Collaborative Archaeologies, Decolonized Foodways” project in Ontario, food residues from archived Indigenous ceramics are queried from different ways of knowing to understand past foodways and to help inform current and future food sovereignty efforts. These two projects work toward connecting the past to present and to help strengthen connections to land and nonhuman communities. In this presentation, we show the potential of such approaches, the challenges of such research, and the importance of pursuing collaborative projects focused on foodways and sustainability in Turtle Island.

Praet, Estelle (University of York)

[36]

Galapagos Marine Plastic Pollution: A Perspective from Contemporary Archaeology

Marine plastic pollution is an issue threatening most places around the world, including the remote and

unique Galapagos archipelago, a UNESCO World Heritage Site. Building on how archaeology of the contemporary world can help address urgent and global environmental issues, this paper offers suggestions for an archaeology of plastic pollution in Galapagos. Two approaches to study plastic pollution in Galapagos are presented: (1) the study of plastic bottles as material culture found on shores of one uninhabited island of the archipelago and (2) the use of object itineraries as an archaeological framework to organize a story-writing workshop with local students. With PET bottles being one of the most recurrent findings on beach clean-ups around the globe, this paper adopts an archaeological approach to their analysis in order to re-create their itineraries. Through an analysis of labels, stamps and production/expiry date, this paper evaluates bottles' origin, pathway, and use, while suggesting solutions. As the issue of plastic pollution is deeply entangled with human behavior, this paper also aims at understanding perceptions of the issue, its sources, impacts and solutions. Results of a story-writing workshop to explore perceptions of marine plastic litter itineraries by students from Santa Cruz will be presented.

Prager, Christian (University of Bonn)

[90]

Unlocking the Secrets of Maya Writing: Justin Kerr and the Decipherment of Maya Script

The documentation effort within the realm of Maya writing research spans nearly a century and a half, commencing with the systematic recording of Maya inscriptions during the latter part of the nineteenth century. Throughout the initial half of the twentieth century, archaeologists associated with the Carnegie Institution distinguished themselves through their exceptional dedication. Their endeavors encompassed the comprehensive documentation and subsequent publication of a substantial corpus that would prove to be of paramount significance in the subsequent decoding of the Maya script. Among the most preeminent documentation undertakings in the latter half of the twentieth century is the pioneering documentation by Justin Kerr, who employed innovative photographic rollout techniques to capture inscribed ceramic vessels. In the late 1990s, Kerr was a trailblazer in recognizing the vast potential of the World Wide Web, making his documentation freely accessible to the public on the Internet. The advancements achieved in the decipherment of the Maya script to date owe much to Justin Kerr. I intend to underscore the particular significance of Justin Kerr's vase documentation in the decipherment process, and I also aim to engage in a discussion regarding the open-access paradigm, which Justin Kerr was the first to introduce to Maya research.

Pratt, Lauren (University of Michigan)

[20]

Forager Adaptations to Andean Cloud Forest, Peru

Cloud forests are montane tropical rainforests typically characterized by persistent fog, diverse microclimates, and rich biodiversity. Although some regions have long histories of development of technological and sociopolitical complexity in cloud forests (e.g., the Mayan highlands), in the central Andes cloud forests have often been considered inhospitable landscapes, only meaningfully colonized by humans following the development of technologies, such as agricultural terracing, which allowed for greater extraction of resources. However, excavation of three sites in the Chachapoyas region of Peru reveal a history of human colonization dating to at least the middle Holocene (ca. 5500 cal BP), and possibly as early as 10,600 cal BP. These groups of foragers drew resources from a variety of microenvironments across the cloud forest ecosystem; site occupation histories and technology suggest continuous use of certain landscapes through the Formative period (ca. 3200–3400 cal BP). The technologies present at these sites differ from forager tools recovered from coastal and highland contexts, highlighting adaptations to the cloud forest that include maximizing available raw materials and use of locally available plant foods.

Pratt, Will (University of Texas, Austin)

[220]

Chair

Pratt, Will (University of Texas, Austin) and Gregory Knapp (University of Texas, Austin [Emeritus])
[220]

Raised Field Nutrient Cycling: Implications for Hydrologic Controls and Landesque Capital

Beginning around AD 600, the Barbacoan speaking peoples of the northern Ecuadorian highlands began building alternating ridge and canal raised field systems. One of the leading hypothesized functions of these raised fields is their role in nutrient cycling. In this scenario, decayed organic matter is mucked from the canals and redeposited atop the agricultural ridges supplementing crops with growth limiting macronutrients. This paper explores this hypothesis in the context of highland Ecuadorian raised fields and examines some of the potential implications for long-term use, hydrologic management, and landesque capital. To examine this hypothesis, we draw on the results of soil analyses conducted on raised fields at the site of Zuleta and examine historic aerial images that show complicated raised field hydrologic networks indicative of intentional design features. We also discuss the benefits that this use of raised fields might have had on soil fertility and how raised fields may continue to provide these benefits even hundreds of years after their abandonment.

Prendergast, Mary [151] see Grillo, Katherine

Prentiss, Anna (University of Montana), Ashley Hampton (Hamilton College), Matthew Walsh (National Museum of Denmark), Megan Denis (University of Montana) and Haley O'Brien (University of Montana)
[304]

Variation in Household Kitchen Activities at Housepit 54, British Columbia: Reflections on Jeanne Arnold's Legacy

Jeanne Arnold left us with a legacy of archaeological research into households, social change, and technological variation in the various contexts across the North American west coast. Her work was always characterized by attention to multiple sources of archaeological insights spanning lithic analysis to subsistence studies. Here, we reflect in Arnold's legacy in light of our multidisciplinary studies of the deeply stratified Housepit 54 at the Bridge River site in British Columbia. Our research currently focuses on variability in kitchen activities with the goal of understanding relationships between subsistence production and social relations throughout the history of the house and associated village. In this paper, we present outcomes of studies on hearths and ovens that include micromorphology, paleoethnobotany, geochemistry, zooarchaeology, and lithic technology. Results suggest that cooking features varied between routine kitchen activities across most floors while occupants of select floors developed larger ovens likely used for social events. These results offer implications for how we understand social change during the history of the house.

Prentiss, Anna [308] see Walsh, Matthew

Preucel, Robert (Haffenreffer Museum, Brown University) and Kai-t Blue Sky (Cochiti Pueblo)
[124]

Indigenizing Heritage: A Perspective from Cochiti Pueblo, New Mexico

Cultural heritage is commonly associated with the preservation of the physical traces of past human existence which are held to be our collective inheritance and to inspire our common future. It is often contrasted with natural heritage defined as natural places distinguished by their natural beauty or outstanding biodiversity, ecosystem, and geological values. From an Indigenous point of view this perspective, however valuable, fails to acknowledge the deep interconnectedness of people and other-than-human beings such as mountains and rivers, plants and animals, clouds and rain. We develop our argument by looking at how Cochiti Pueblo has responded to two external challenges—the building of Cochiti Dam and the Las Conchas fire. These cases are particularly informative because they bring cultural values into sharp focus and suggest some steps toward the reintegration of heritage as a response to the challenges of the Anthropocene.

Price, Jeremy [156] see Simek, Jan

Price, Max (Durham University)

[132]

Chair

Price, Max [85] see Wolfhagen, Jesse

Prieto, Alfredo [158] see Garcia-Piquer, Albert

Prieto, Gabriel (University of Florida)

[158]

Discussant

[212]

Chair

Prieto, Gabriel (University of Florida)

[212]

“Sowing” Children in Arid Lands Irrigated with Artificial Hydraulic Canals in the Moche Valley, North Coast of Peru
The discovery of hundreds of sacrificed children in the North Coast of Peru, has opened new opportunities to study ritual violence in ancient societies. Current studies have identified that mass sacrificial events were performed at moments of sociopolitical and economic instability due to climatic anomalies such as ENSO events. More recently, it has been suggested that child sacrifice was performed as part of a sanctioned violence program executed to exert sociopolitical control by the Chimú elites. In 2022, excavations in a new sector at Pampa la Cruz, Huanchaco, uncovered a set of 48 sacrificed children buried in direct association with artificial irrigation canals and agricultural fields built by the Chimú state. In this paper, it is suggested that child sacrifice could have played a symbolic role to “energize” the fields and crops by pouring young blood on the newly artificially irrigated lands. In addition, the discovery of *Spondylus* shells and miniatures of silver artifacts in association with the sacrificed children, indicate more sophisticated sacrificial ceremonies in order to increase crop production. Parallels with Inca cosmology is employed to establish the ideological principles of such sacrifices and the role played by children in Chimú economy.

Prieto, Gabriel [117] see Emmons, Sophia

Prieto, Manuel [242] see Garcia, Magdalena

Prieto, Gabriel [119] see Hernández Castillo, Daniel

Prieto, Gabriel [53] see Alegria, Maximillion

Prieto, Gabriel [212] see Parker, Glendon

Prieto, Gabriel [259] see Ponciano Diaz, Daniel

Prieto, Gabriel [212] see Sutter, Richard

Prieto, Gabriel [212] see Witt, Rachel

Prieto, Gabriel [37] see Young, Michelle

Primeau, Kris (NYS ORES), Kellam Throgmorton (Northern Arizona University), Ruth Van Dyke (Binghamton University, SUNY) and David Witt (SUNY Buffalo)

[172]

Sounds of Change: Mapping Auditory Experiences through Time in the Greater Chaco Landscape

Recent work has demonstrated that audibility between habitation sites, monumental construction, and other landscape elements was an actively managed aspect of the Ancestral Puebloan built environment both within Chaco Canyon and the Greater Chaco Landscape (GCL). GCL communities were inhabited for hundreds of

years, during which the layout and relationships between features of the built environment transformed. These changes resulted in different sound environments and thus different auditory experiences over time. Focusing on the Morris 40 community, located on Ute Mountain Ute Land in northwest New Mexico, the authors modeled estimated soundsheds using the Archaeoacoustics Toolbox for GIS to explore how sounds produced within the landscape may have been heard and experienced as the community was established, grew, and declined between 750 and 1300 CE.

Prince-Buitenhuys, Julia (CA Dept of Transportation)

[66]

Moderator

[313]

Discussant

Prince-Buitenhuys, Julia (CA Dept of Transportation), Karen Brunso (Chickasaw Nation) and David Witt (SUNY Buffalo)

[293]

Forget Projections, Be the Change: Crushing Archaeology Career Myths to Inspire New Trajectories for CRM

One of the most popular narratives at this time in archaeology, promoted by Altschul and Klein 2022, is that there will be a dearth of archaeologists now and into the near future, particularly archaeologists with master's degrees or higher. This presentation will bust the myths regarding the role and necessity of advanced degrees in CRM and present some critical areas that CRM archaeologists, academics, and students can look at now to drive innovative transformations to the CRM business at all levels of the career. This includes a discussion of legal requirements vs. business practices, assumptions we are making regarding the role of education for CRM today, and some practical steps that can be taken to transform our expectations and practices for CRM career trajectories.

Prince-Buitenhuys, Julia [293] see Brunso, Karen

Prince-Buitenhuys, Julia [293] see Witt, David

Priprá, Walderes Cocta [178] see Bond Reis, Lucas

Procopiou, Haris [113] see Ogawa, Timothée

Proebsting, Eric (Thomas Jefferson's Poplar Forest), Karen McIlvoy (Thomas Jefferson's Poplar Forest) and Erin Schwartz (Thomas Jefferson's Poplar Forest)

[227]

Community from the Ground Up: Launching the 1857 Slave Dwelling Project at Thomas Jefferson's Poplar Forest

Ongoing work at Thomas Jefferson's Poplar Forest strives to explore the history and legacy of those who shaped the landscape of this National Historic Landmark, beginning in the 1760s and continuing through emancipation. This includes collaborative efforts with members of the local African American community to explore historic sites, families, and individuals associated with the enslaved men, women, and children who lived and labored on this Virginia Piedmont plantation over time. Recent archaeological research has focused on a standing brick quarter that was built in 1857. This new project provides a unique opportunity to both preserve and restore a place that can powerfully speak to the stories of slavery and emancipation associated with the history of the plantation as well as the lives of Black tenants who lived in this building into the early twentieth century.

Prout, Michael (CSULA Anthropology)**[221]***The Liminal Space between Two Plazas: Insights into Ancient Maya Ritualistic Cave Activities at Las Pacayas*

The Cueva de los Quetzales was initially reported in 1991 by the Petexbatun Regional Cave Survey and more intensively investigated in 1993 in conjunction with the Altas Arqueológico de Guatemala's excavation of the surface site of Las Pacayas. The site is located 12 km south of Dos Pilas and 7.5 km east of Aguateca. The cave is noteworthy in running through the highly modified hill on which Las Pacayas was built and has an opening in the ceiling that was positioned on the boundary where the two principal plazas meet. Offerings dropped through the opening formed a conical mound 3–5 m deep in the chamber below. J. Eric Thompson calls attention to such large ritual cave deposits in his 1959 article "The Role of Caves in Maya Culture." Excavations within the mound left no doubt about its ritual nature in producing over 300 fragments of ceramic drums, portions of 43 ocarinas and flutes, and a human skeletal assemblage among the artifactual material dating from the Late Preclassic to the Late Classic. This paper provides the first analysis that relates the osteological component to this very specialized ritual context.

Prufer, Keith (University of New Mexico), Dolores Piperno (Smithsonian Institution), Nadia Neff (University of New Mexico), Mark Robinson (Exeter University) and Douglas Kennett (University of California, Santa Barbara)**[217]***Early and Middle Holocene Food Choices, Farming, and Diet Quality in the Neotropical Maya Area*

Despite a century of research into the lives and diets of the northern neotropics' earliest populations, our understanding of food production and consumption and its impact on diet quality remains relatively impoverished. We present a first view of data generated from archaeological sites in the Maya Mountains of southern Belize where a decade of research is fundamentally changing how we view early human relationships with food in tropical environments. These data come from dietary isotopes derived from ancient humans and fauna combined with data from microbotanical starch grains extracted from ancient dental calculus and grinding stones as well as modern domesticated and wild edible plants. These data were generated with an emphasis on quality control for dietary proxies. We see evidence for consumption of root crops by 10,000 cal BP and seed, yam, and squash crops by 7500 cal BP, including maize. These developments suggest a protracted period of subsistence farming lasting at least 5,000 years before investments in surplus agricultural production drove major demographic shifts starting after 4000 cal BP.

Prufer, Keith [194] see Hernandez-Bolio, Gloria

Prufer, Keith [80] see Meyer, Jana

Prufer, Keith [201] see Neff, Nadia

Prufer, Keith [194] see Ray, Erin

Prufer, Keith [217] see Robinson, Mark

Prufer, Keith [295] see Rosenswig, Robert

Prumers, Heiko [155] see Iriarte, Jose

Pryor, John (CSU, Fresno) and Waylon Coats (Vice Chair Southern Sierra Miwok)**[99]***Toward a Miwok Archaeology of Yosemite California*

While there is a long history of archaeological work in Yosemite National Park, this work is grounded in Western European traditions of archaeology that does not take into consideration perspectives of the people who produced much of the record this archaeology sets out to understand. These people had their own sense of time, space, and values that affected how they inhabited Yosemite, which in turn affected the materials they left behind. Because humans construct the worlds we live in through culture, the authors of this poster suggest that it is impossible to understand the archaeology of Yosemite using Western European

constructs of time, space, and values. We feel that it is way overdue for a completely different approach to the archaeology of Yosemite, an archaeology grounded in a Miwuk worldview. While this poster takes a Miwuk perspective, it does not want to imply that Yosemite belonged to the Miwuk. It was shared space, seen as sacred to a number of Native American peoples. This poster is a logical extension of earlier work by authors that laid out the broad-brush strokes of Miwuk Archaeology. This poster attempts to apply this archaeology to the specific location of Yosemite.

Ptacek, Alexandra (Arizona State University), Matt Peeples (Arizona State University), Matthew Kroot (Arizona State University), Eunice Villasenor Iribe (Arizona State University) and Jessie Kortscheff (Arizona State University)

[102]

Challenges of Community-Based Heritage Work: Rights Holders, Stakeholders, and the Palimpsest Nature of the Archaeological Record

Preservation projects differentially affect rights holder and stakeholder communities. Heritage management professionals can try to accommodate such disparate communities through active collaboration, consultation, and accountability practices. Yet, compliance practices in the heritage profession, as well as the political-economic dynamics and legal architecture behind them, variously structure, constrain, and empower avenues for engagement with affected communities. This can result in a failure both to consider and pursue consultation and collaboration with certain ethical clients. This poster explores the complicated history of ownership, occupation, and heritage imaginaries in the development of site management practices for part of the S'edav Va'aki (formerly known as Pueblo Grande) Museum and Archaeological Park in Phoenix, Arizona. To overcome such challenges, heritage professionals must grapple with the totality of material remains and land-use histories and commit to active community engagement as an essential part of any project, rather than passive means of providing opportunities for consultation.

Puckett, Heather

[270]

Chair

Puckett, Heather

[326]

Preparing for the Great War: How Lidar and GPR Helped Locate Military Training Resources

To date, no comprehensive study examining World War I training had been available for the Department of Defense (DoD). In 2017, the Alabama National Guard partnered with the Mississippi National Guard and Panamerican Consultants on a DoD Legacy Resources Management Program project (CR 18-834) to synthesize existing research on the various types of World War I technology, tactics, and training, and the physical remnants of that history. The research team developed a survey tool to form a baseline inventory from all branches of DoD for both architectural and archaeological resources. Five case study locations were selected for further intensive research and the application of research questions; identifying the types of properties associated with training; and as a means to evaluate properties with reference to local, state, regional or national significance using the National Register of Historic Places Criteria. This paper will discuss the use of geophysical techniques to identify World War I resources for ground truthing.

Puente, Nicholas (University of Colorado, Boulder), Sarah Kurnick (University of Colorado, Boulder) and Ethan Abbe (University of Edinburgh)

[221]

Entering Chahk's Realm: Ancient Cave Use and Ritually Deposited Speleothems in Postclassic Architecture at Punta Laguna, Yucatán, Mexico

As rainwater seeps into caves over millions of years, it creates calcium carbonate formations known as speleothems. Ancient Maya peoples associated speleothems with the Earth Monster's fangs, the Serpent

Deity, and caves from which Chahk, the rain god, brings rain. As such, speleothems are animate embodiments of fertility and ritually pure water called *zuhuy ha*. In 2022, the Punta Laguna Archaeological project found 12 speleothems associated with a miniature masonry shrine at the site of Punta Laguna in Yucatán, Mexico. This paper presents the findings of the subsequent 2023 cave survey and mapping project. Additionally, the authors note three benefits of combining surface settlement and adjacent cave data to provide a more holistic understanding of ancient Maya peoples. Caves provide insight into the preliminary steps necessary for some surface rituals to occur. The transportation of speleothems between caves and built environments questions the traditional Western binaries that distinguish between natural and constructed landscapes. Lastly, a comparison of surface and subsurface activities suggests that the life force, or *ku* in Yucatec Mayan, of caves was dynamic and could both animate new spaces and create artificial caves within surface settlements.

Pugh, Erin [84] see Plata Aguilera, Olganydia

Pugh, Jonathan (newcastle university, uk)
[18]

Discussant

Pugh, Timothy (Queens College; Graduate Center), Evelyn Chan (Proyecto Itza), Jemima Georges (Graduate Center, CUNY) and Gabriela Zygadlo (Hunter College, CUNY)
[275]

Artificial Pools at Middle Preclassic Period Nixtun-Ch'ich', Petén, Guatemala

Recent work at Nixtun-Ch'ich', Petén, Guatemala has revealed several artificial ponds. Many of the pools occurred naturally but were enhanced through the construction of floors and walls and the manipulation of groundwater flow. Some of the pools contained large ritual deposits, including ceramic sherds, animal bones, greenstone objects, and roller stamps. However, others did not appear to have held such deposits. Two of the pools and at least 21 buildings, including three E-Groups and a triadic group, formed the site's east-to-west axis urbis. This row of constructions dominates the landscape of Nixtun-Ch'ich'. One of the two axial pools also borders an essential north-to-south avenue, which divides the city into quadrants along with the axis urbis. Thus, this pool, along with an adjacent temple, form the conceptual center of the city. Thus, the pools were critical to the sacred landscape of Nixtun-Ch'ich'.

Pugh, Timothy [110] see Chan, Evelyn

Pugh, Timothy [110] see Kalinkos, Lia

Pugh, Timothy [110] see Voltaire, Mikael

Pugliese, Francisco (University of São Paulo), John Krigbaum (University of Florida), Kenneth Sassaman (University of Florida), Luis Cayón (University of Brasília) and Michael Heckenberger (University of Florida)
[178]

Gruta do Gentio II: Data on the New Excavations and Isotopic Signals from the Site

The Gruta do Gentio II is an iconic site in the archaeology of Central Brazil because of its early occupation and rich excavation history. Situated in the interfluvial region of the Central Plateau, renewed investigation (after 35 years) offers new perspectives for the site. Data produced during the 1970s and 1980s revealed a wide variety of remains dating from the Early to the Terminal Holocene, found in association with human burials and rock art never seen in this area. In this presentation, new isotopic data from multiple systems using preserved tooth enamel and bone are presented with new AMS dates. The context of the human remains is reviewed and remains are situated against an isotopic baseline. Dates on preserved macrobotanical remains suggest that the site may be one of the oldest occupations to date in the lowlands of South America. The dates of the most recent burials are slightly before the arrival of the Europeans and show secondary burials. This suggests possible

correlations between ethnographic groups, enabling various correlations between archaeology, linguistics and ethnography, especially with groups of the Macro-Jê speaking people (e.g., Bororo).

Pugliese, Melanie, Lachlan Davis-Robinson, Iban Berganzo Besga and Monica Ramsey
[256]

In Process: The Development of an Automatic Deep-Learning Phytolith Analysis Workflow

In this paper we present our lab's latest results using deep-learning (DL) to identify and analyze phytoliths, robust inorganic silica "casts" of plant-cells. This use of DL technology will revolutionize phytolith analysis transforming the possibilities of this paleoethnobotanical method. Previous studies carried out in relation to the automated detection and classification of objects such as mounds or potsherds in images have demonstrated the potential of DL in the field of archaeology. Studies with pollen or cells have also shown DL's potential in bioarchaeology. Regarding phytoliths, previous works have shown the potential of automated classifications, but these studies focused on single-cell phytoliths. Our lab recently demonstrated that it is possible, using a pretrained DL model, to identify and classify multi-cell phytoliths, specifically three key grass husk multi-cell genera: wheat, barley, and oat. Focused on the wave pattern, the negative space between the phytoliths, our DL algorithms produced an identification accuracy of 93.68%. Building on this success, we have continued to develop our algorithms for Near Eastern plant taxa with positive results. This research ultimately aims to facilitate paleoenvironmental analyses at a landscape scale, making the prehistoric environment and human impacts in those environments visible at a scale otherwise not possible.

Pugliese, Melanie [256] see Herrera-Parra, Esteban

Punyasena, Surangi [288] see Feng, Jennifer

Punzo Díaz, José Luis (Instituto Nacional de Antropología e Historia)
[152]

Discussant

[106]

Chair

Punzo Díaz, José Luis (Instituto Nacional de Antropología e Historia), Miguel Alberto Ibarra López (Centro INAH-Michoacán) and Jakob Sedig (Harvard University)
[106]

Bioarchaeological and Genetic Analysis of the Tzintzuntzan Ossuary

This poster will present the first results from the bioarchaeological analysis of more than half a ton of human skeletal remains recovered from the ossuary of the ancient city of Tzintzuntzan on the shores of Lake Patzcuaro in the state of Michoacán, Mexico. In addition to conventional morphological analysis, more than 100 individuals from this ossuary have been sampled for ancient DNA analyses. The results of these analyses provide new insights about the population structure of Tarascan-era west Mexico. Ancient DNA analysis has also provided richer insight into the individuals that were placed in the ossuary, as most of the bones were extremely fragmentary and therefore could not have age, sex, stature, or other biological markers assessed.

Punzo Díaz, José Luis [106] see Budziszewski, Adam

Punzo Díaz, José Luis [106] see Garcia Lopez, Carmen

Punzo Díaz, José Luis [290] see Navarro Sandoval, Fernanda

Punzo Díaz, José Luis [106] see Pelaez-Ballestas, Ingris

Punzo Díaz, José Luis [106] see Ramos Osnaya, Carmen

Purcell, Gabrielle (Troy University), Silvia Marini (University of Pisa), Paolo Sangriso (University of Pisa), Cayla Schofield (Troy University) and Riley Caton (Troy University)
[202]

Archaeobotanical Remains from the Roman Harbor Vada Volaterrana

We present preliminary botanical data and interpretations from the ancient Roman harbor of Vada Volaterrana, located in the modern province of Livorno, Italy. The harbor was supported by a network of structures immediately surrounding the port at Vada's San Gaetano site. A 2015 GPR survey identified a series of rectangular buildings of unknown purpose in the southern sector of this site whose subsequent excavation produced several botanical and faunal remains. In 2019, a collaborative project between the University of Pisa and Troy University began investigating the cultural activity at San Gaetano's buildings I, L, and M. Archaeobotanical samples were collected during the 2017 to 2023 field seasons. Paired with architectural, artifactual, and zooarchaeological data, our botanical results help uncover shifts in both subsistence patterns and cultural enterprises at this building complex.

Puryear, Iris (Thomas Jefferson Foundation) and Cate Garcia (Thomas Jefferson Foundation)
[173]

Digging Deeper into Tsenacommacah: A Temporal and Spatial Analysis of the Precontact Archaeological Record at Virginia's Flowerdew Hundred Plantation

Decades of archaeological work at Flowerdew Hundred, a tobacco plantation located in the Chesapeake region of Virginia, have focused primarily on its seventeenth-century occupation by English elites, indentured servants, and enslaved Africans. This research perspective has obfuscated the presence and impact of the Weanock (a Late Woodland people situated in the political territory of Tsenacommacah) and other precontact Native groups whose activities on the landscape are equally well-documented in the material record. Archaeological investigations exposed numerous precontact features and over 20,000 artifacts attesting to a substantial Native presence on the site over the millennia preceding European colonization. This poster characterizes Flowerdew's 10,000 years of indigenous habitation by enlisting artifact and contextual data from three sites catalogued comprehensively into the Digital Archaeological Archive of Comparative Slavery (www.daacs.org). We explore the spatial and temporal variation in over 16,200 lithic and 8,700 ceramic artifacts excavated from subsurface features and stratigraphic deposits distributed across the area of study. In doing so, we present a framework for understanding precontact activity areas and settlement patterns at Flowerdew Hundred and offer an essential baseline for further research into the complex social dynamics that continued to play out between Native peoples and the site's occupants after 1619.

Puseman, Kathryn [219] see Lee, Craig

Pyburn, K. Anne (Indiana University, Bloomington)
[21]

Discussant

Pye, Jeremy (Cultural Resource Analysts Inc.)
[69]

Guidelines for Creating a Typology for Mass-Produced Nineteenth- and Twentieth-Century Burial Container Hardware
The analysis and historical study of burial container hardware and other mortuary artifacts is crucial in establishing a useful discourse between the multiple lines of evidence recorded and recovered in historical cemetery investigations. Exact identification of types and styles of burial container hardware is vital in defining the chronology of burial, which is necessary in situations where grave markers have been lost or moved from their original locations. In addition, variations in hardware styles and forms, as well as materials of manufacture, indirectly reflect aspects of socioeconomic class, status, and/or community involvement in the funeral process. A full understanding of the burial container hardware exposes aspects of the deepening

control of the professional funeral industry in the production and distribution of funeral merchandise during the late nineteenth and early twentieth centuries.

Pyszka, Kimberly (Auburn University, Montgomery) and Andrew McMichael (Auburn University, Montgomery)

[2]

An Archaeologist and a Historian Walk into a Classroom . . .

During the fall 2022 semester, we co-taught a Special Topics in Anthropology course entitled the Culture and History of Food and Drink. From our respective academic backgrounds as a historian and an archaeologist, we provided students with both an anthropological and a historical perspective to examine how specific foods and beverages contributed to historical change over time, and how they affected, and continue to affect, human culture. Additionally, we considered how foods and drinks help to shape, convey, and retain cultural identity. Using food items such as grains, coffee, chocolate, and even Spam, students learned how these foods shaped and changed human history and culture. Purposely designed for a small class size, we strived for a classroom environment where students were actively engaged with the course materials in a variety of ways, including hands-on activities, guest lecturers, discussions of their own experiences with food, and of course, the sharing of food. As we prepare to teach the course again, we share our successes and lessons learned, in particular how we assessed students.

Qais, Deepr Sanjid (Archaeometry Laboratory, MURR), Candace Sall (Museum of Anthropology, University of Missouri), Alexandra Kuo (Archaeometry Laboratory, MURR) and Brandi MacDonald (Archaeometry Laboratory, MURR)

[41]

Compositional Analysis of Glass Beads from Missouri Historic Sites Using Laser Ablation–Inductively Coupled Plasma–Mass Spectrometry

Chemical analysis of glass beads using laser ablation–inductively coupled plasma–mass spectrometry (LA-ICP-MS) is a commonly applied technique in archaeometric analysis. The compositional study of glass and glass objects provides insight into the raw materials used, and their manufacturing processes and workshop origins. Among many early historic period North American contexts, they also provide insight into the chronology of cross-cultural relationships between Indigenous peoples and European settlers as glass beads were a commonly traded item. This poster will present preliminary results from the compositional analysis of an assemblage of monochrome and polychrome glass beads and bead fragments from Missouri historic sites, using LA-ICP-MS.

Qin, Xiaoli (Fudan University) and Xiaohan Zhao (Fudan University)

[19]

Resources, Technological Traditions, and Social Networks: A Study of Late Neolithic Cooking Vessels in the Lake Taihu Region

During the Songze cultural period, there were two distinct technological pathways for the production of pottery cooking vessels, including *Ding* (tripod) and *Yan* (steamer), used in the vicinity of Lake Taihu. In areas like southern Jiangsu, Shanghai, and Jiaying, plant debris was commonly mixed with clay to create fiber-tempered vessels. In contrast, areas like Anji and Yuhang primarily used mineral tempers. This division in culture and technology can be attributed to geographical separation. During the mid-Holocene period, a significant marine transgression occurred, possibly connecting Lake Taihu to the Qiantang River near Linping and forming a bay. While the bay gradually filled with sediment by the Songze cultural period, it is plausible that residual water bodies remained. These rivers and lakes acted as barriers, separating the hilly region of Tianmu Mountain from the main Songze cultural area in the southeast and northeast of Lake Taihu. Consequently, the exchange of materials and interactions of social groups was impeded, leading to the gradual emergence of distinct social networks in each region. As a result, communities adapted to their specific environments and developed unique technological traditions of tempers. This will serve as crucial clues for interpreting the formation process of the Liangzhu culture.

Qin, Xiaoli [256] see Wang, Jiajing

Quade, Jay [337] see Ugalde, Paula

Quaintance, Hannah
[148]

Community-Defined Heritage and Uncertain Futures

This presentation considers heritage as defined by members of stakeholder communities that have experienced a history of displacement as well as the pressures of disaster capitalism/neoliberal development. It explores the value of community-defined concepts of heritage to the process of preserving heritage as defined by scientific and academic communities. How does a community conceptualize the past and cultural heritage when confronted with significant environmental change? What strategies are being practiced on individual and community levels to protect places and activities that support the transmission of cultural knowledge? As specialists consider the future of threatened heritage sites and identify strategies for preservation, how might these localized, community-driven actions affect their decision-making? How is our work as scientists and researchers supporting the heritage interests of threatened communities? While archaeologists and other researchers are concerned with issues of preservation in the face of development and climate change, local communities may feel a greater urgency to protect their day-to-day lives. This qualitative work was informed by interviews with members of communities of relevance.

Quam, Curtis [269] see Heitman, Carrie

Quates, E. W. Duane [283] see Camp, Stacey

Quates, E. W. Duane [224] see Carroll, Jon

Quave, Kylie (George Washington University)
[26]

Serving the State under Surveillance: Material Correlates of the Watched on an Inka Royal Estate (Cusco, Peru)

Excavations at the fifteenth- to sixteenth-century Inka royal estate installation of Cheqoq (Maras, Cusco) reveal domestic spaces likely inhabited by both the watched (the retainers to the nobility) and the watchers (the intermediate elites overseeing laborers). Typical interpretations of the presence/absence of luxury goods cannot be relied on in the complex settings in which surveillance disciplined state subjects into imperial purposes and imperial values. With knowledge of the laboring conditions of the residents of Cheqoq (through archival sources and more), one can contextualize the presence of certain kinds of goods as more than mere wealth. I describe the possible material correlates of an overseer or administrator household at this royal estate. I also detail the evidence for being watched found in retainer laborer households, including misfired imperial ceramic vessels from Cheqoq's pottery workshop. I ask whether the "toting effect," in which high-status goods make their way into households not otherwise experiencing the liberties of a high-status life, might be leading to misinterpretation. The material record of being watched while living under coercive labor conditions offers a view of daily experiences in exploitative settings.

Quave, Kylie [100] see Kucur, Ezra

Quezada-Euán, Javier (Universidad Autónoma de Yucatán)
[83]

Popularización: Aspectos favorables y negativos para la meliponicultura del siglo XXI

La meliponicultura en México, así como en gran parte del mundo, ha experimentado un creciente interés y

popularidad. Un mayor número de personas y grupos se están involucrando en la actividad lo que ha llevado a su expansión tanto de las regiones donde se practica, como en el número de especies que se están utilizando. Han surgido nuevos factores que deber ser tomados en cuenta para evitar impactos negativos sobre la biodiversidad y sustentabilidad de la actividad. En esta presentación, expongo algunos de los beneficios que la creciente popularidad de las abejas sin guijón y sus productos han traído para la conservación de la actividad y al mismo tiempo se discuten los posibles riesgos que su expansión acelerada puede traer para su mantenimiento. Es importante tomar conciencia y desarrollar una planificación conjunta entre sociedad, productores y tomadores de decisiones, sustentada en evidencias científicas, para evitar que en aras de la conservación se destruya y pierdan recursos invaluableles.

Quick, Russel [105] see Foe, Aldo

Quinn, Colin (University at Buffalo)
[176]

Temporalities of Middle Bronze Age Cemeteries in Transylvania

The Middle Bronze Age in Transylvania was a time of rapid population growth and centralization, the emergence of shared regional identities mediated through mortuary practices, and the institutionalization of large-scale trade and exchange networks that moved metal and salt from this resource-rich area across the Carpathian Mountains and Basin. Communities established cemeteries where they buried urns filled with cremated remains. This poster presents the results of new radiocarbon dating and Bayesian modeling of mortuary activity at the two largest known cemeteries: Sebeş-Între Răstoace and Oarda de Jos/Limba-Şeşul Orzii. These new data demonstrate that mortuary activity at these sites occurred over a short period of time, which has consequences for our understanding contemporaneous variation in burial treatments, open access to burial rites, and processes of site abandonment during this important era of social, political, and economic transformation.

Quinn, James [258] see Cipolla, Craig

Quinn, James [99] see Levy, Jay

Quinn, Patrick [287] see Lozada Mendieta, Natalia

Quiñonez, Jackeline [291] see Barrios, Edy

Quiñonez, Patricia, John Warner and Stephen Berquist (Sewanee: The University of the South)
[76]

Archaeologies of Flow in the Southern Jequetepeque: The Organization of Infrastructure, Irrigation, and Roads

Canoñillo probablemente derivó su importancia inicial de su posición a lo largo de los principales corredores de tránsito que conectaban la costa y la sierra. Su ubicación en el margen del desierto no se presta fácilmente al asentamiento. El río Jequetepeque se encuentra a 8-10 km. Los pequeños lagos cercanos no pudieron sustentar una gran población agrícola y no podemos estar seguros de su antigüedad. Las dunas de arena masivas se arrastran a través de la pampa y las quebradas frecuentemente descargan inundaciones repentinas. Para establecer una ruta viable, los habitantes de Canoñillo tuvieron que adaptar su entorno. Una elección de ubicación "natural" requirió un enorme esfuerzo humano y una estrategia inteligente para crear y mantener. Tales estrategias cambiaron con el tiempo, en relación con los cambios ambientales, económicos y sociopolíticos. Dada los "seres de la tierra" en el mundo andino, la infraestructura de Canoñillo materializa así nociones de gobernanza. En este artículo discutimos investigaciones preliminares sobre los caminos, canales y sistemas de campo, junto con muros diseñados para canalizar el agua que fluye y

la arena que sopla. Nuestros datos indican dos períodos principales de expansión agrícola, en el Formativo tardío y en el Intermedio Tardío temprano.

Quiñonez, Patricia [76] see Wai, Christopher

Quintana-Owen, Patricia [194] see Hernandez-Bolio, Gloria

Quintanilla, Desiree (University of Texas, San Antonio; Malheur National Forest)

[44]

Fire Lookout Viewsheds in the Malheur National Forest

Fire lookout towers are early twentieth-century structures built by the US Forest Service for the purpose of early wildfire detection. As the Forest Service moves away from staffing fire lookout towers, some call for the decommissioning and tearing down these structures, including within the Malheur National Forest. However, these historic towers still serve a purpose. Viewshed analysis demonstrates that the combined viewshed of several lookout towers covers more than what a single person alone can see. Therefore, lookouts are an invaluable resource as wildfire danger increases throughout eastern Oregon. Although fire lookout towers are historic structures, they continue to serve a crucial role in early fire detection within the Malheur and thus should be protected and maintained.

Quintus, Seth (University of Hawaii, Manoa)

[56]

Islands of Ideology: Exploring Group Formation in Hawai'i and Sāmoa

Social consent was essential to promote cooperation and group identity. Because of disciplinary attention to top-down processes of power accumulation and political classification, how social notions of social consent in middle-range societies were modified and diversified is poorly understood. The societies of Polynesia provide an opportunity to better understand the circumstances under which different power strategies were employed to build larger-scale communities within divergent ideological frameworks. Highly variable systems of leadership developed in the region at the intersection of two notions, one associated with the sacred and exclusive nature of leaders and the other associated with populism and consensus building. This paper will examine the archaeological signatures of these processes using Hawai'i and Sāmoa. These societies contrast markedly, occupying different subregions of Polynesia and possessing fundamentally different political structures by the eighteenth century. At the same time, leaders in Hawai'i and Sāmoa employed similar notions of mana to legitimize their actions and position. The archaeological record of both areas allows exploration of inequality, concessions, and public works to better understand how such variability in political structure operated and how the ideological framework of these places was modified to meet the needs of both leaders and communities.

Quiroz, Carlos [226] see Martinez, April

Quispe-Bustamante, Hubert [286] see Belisle, Veronique

Quispe-Bustamante, Hubert [299] see Brown, Matthew

Raab, Bailey (Northern Illinois University) and Dana Bardolph (Northern Illinois University)

[87]

Plants Are Friends and Food: Reinterpreting Fort Ancient Plant Use through Indigenous Ontologies and Traditional Ecological Knowledge

Paleoethnobotanical analyses over the past several decades have shed light on the subsistence practices, agricultural strategies, and environmental interactions of members of the Fort Ancient culture, an Indigenous

society that thrived in the Ohio Valley from the eleventh to the eighteenth centuries. Largely absent from these conversations, however, are discussions of non-comestible uses of plants or considerations of traditional ecological knowledge (TEK). By combining different sources of knowledge, a more holistic view of plant usage by Fort Ancient peoples may be established—one that allows us to better understand relationships between people and plants in the past and present. In this paper, we synthesize the existing literature on Fort Ancient paleoethnobotany and reinterpret patterns that historically have been more grounded in human behavioral ecology approaches of dietary choices and resource management by drawing on perspectives from Native ethnobotanists. We conclude with our goals for a future community-based research program that marshals paleoethnobotanical analysis in the Fort Ancient region in relation to contemporary food sovereignty efforts and ecological reconstructions that have the potential to inform modern conservation protocols.

Raad, Danielle (Stanford University)

[184]

Chair

Raad, Danielle (Stanford University)

[184]

Teaching with Collections: The Power of Object-Based Pedagogies

Collection-based pedagogies present an exciting platform for active, inquiry-based learning and advancing the goals of equitable teaching. They engage interactive, critical, reflective, creative, affective, and other approaches that anchor learning and build community in the tangible, physical presence of objects. This presentation is about teaching with, not strictly about, artifacts and material culture. There is a range of curricular possibilities for object-based teaching: collections can serve an illustrative role where connections between course material and objects are content-related. Collections can also play an effective role in developing or strengthening essential and transferable skills, like critical thinking and evidentiary reasoning, and help cultivate dispositions or habits of mind, such as patience, deep attention, empathy, grappling with ambiguity, and accepting multiple perspectives. Collections here are expansively conceived, including artifacts, ethnographic or historic objects, and fine art. A nineteenth-century landscape painting can activate a conversation about settler expansion and Indigenous erasure, for example, while a comparison of contemporary and precontact Mexican ceramics can reveal stories of survivance and adaptation.

Radde, Hugh (University of California, Santa Barbara)

[249]

Open Ocean Fisheries of Indigenous California: Origins and Technological Inferences

Pelagic fishing entails substantial risks and investments in fishing equipment, including sturdy boats, paddles, hooks, lines, nets, and spears. In the context of Indigenous California, this fishing practice has been linked to population growth and the evolution of fishing technologies over the past 1,500 years. However, in local environments such as Santa Catalina Island, communities engaged in open ocean fishing and successfully captured large-bodied fish, like tuna, several millennia earlier in history. Through an interdisciplinary approach encompassing zooarchaeology, geographic information systems (GIS), historical documents, ethnographic accounts, and contemporary fishery data, this study examines global tuna fishing methods. The aim is to gain deeper insights into the technologies and strategies utilized by Indigenous islanders. By employing osteometry, I estimate body sizes to better comprehend fishing capabilities before the advent of sewn-plank canoes and single-piece shell fishhooks. The results demonstrate that the earliest evidence for large-bodied, pelagic fishing began on the southern Channel Islands ca. 5,000 years ago and gives new insight on Indigenous watercrafts and fishing practices.

Radde, Hugh (University of California, Santa Barbara)

[249]

Chair

Rademaker, Kurt (Michigan State University)**[20]***Discussant*

Rader, Shelby [92] see Hawley, Kirsten

Radillo Rolón, Diana (Shumla Archaeological Research and Education Center [SAREC]), Carolyn Boyd (Texas State University), Siobhan Anderson (SAREC) and David Keim (SAREC)
[156]*Origins and Tenacity of Myth: Part I—Archaeology*

“Origins and Tenacity of Myth” is a comprehensive study of Pecos River–style (PRS) pictographs in the Lower Pecos Canyonlands of Texas funded by the National Endowment for the Humanities. It is a collaborative project between Texas State University and Shumla Archaeological Center. This presentation addresses the archaeological component of the project and two of the study’s research questions: (1) Are PRS murals single compositions or a random collection of images? (2) Did the artists follow strict painting conventions in their creation? To answer these questions, we used digital microscopy to systematically analyze intersecting paint layers in three complex PRS rock art panels. We graphically diagrammed the microscopy results using Harris Matrix Composer software to establish the murals’ stratigraphy and then used Adobe Photoshop to replicate the paint sequence through digital, layered illustrations of each rock art panel. The results demonstrate that the paint application order of the murals was rule-governed and that they were rendered during a single painting event. Further, recent radiocarbon ages for PRS demonstrate that artists strictly adhered to this paint application sequence in mural production for at least 3,500 years between 5500 and 2000 cal BP.

Radillo Rolón, Diana [156] see Boyd, Carolyn

Radimilahy, Chantal [217] see Crowther, Alison

Radlo-Dzur, Alanna (Princeton University)**[164]***Miniscule Metates: Models for Miniaturization***[WITHDRAWN]**

Radovic, Siniša [247] see Vidas, Lia

Rafferty, Kevin [103] see McCarthy, Andrew

Ragsdale, Corey (Southern Illinois University, Edwardsville)**[11]***Discussant***[80]***Chair***Ragsdale, Corey (Southern Illinois University, Edwardsville)****[80]***Population Replacement and Radiation and the Decline of the Great Moravian State*

Great Moravia is credited by historians as the first Slavic state, existing briefly in the ninth and early tenth

centuries. Internal disputes, Magyar incursions, conflicts with the Frankish Empire, and climate change events contributed to the decline and demise of the Great Moravian state. Although these events are supported by archaeological and historical records, the fate of the people and potential changes to population structures throughout Moravia is not well understood. This study examines potential population replacement events corresponding with the demise of the Great Moravian state from neighboring areas, as well as potential destinations of displaced people from the center of Mikulčice. Dental morphological data from ninth- to thirteenth-century sites throughout Moravia, Bohemia, Poland, Hungary, and Germany are compared using biological distance analysis. Results support a major shift in the biological population structures of settlements in Moravia after the tenth century, likely as a result of colonization from modern-day Hungary and Germany. Additionally, the results support a multidirectional radiation of migrants from Mikulčice to Hungary and Bohemia. This study sheds light on the nature of migration events to and from an area within Central Europe that experiences a major cultural shift coinciding with the decline of a state.

Ragsdale, Corey [80] see Brady, Arden

Rainville, Charles (USDA-NRCS, Trust For Tomorrow)
[267]

Exploring the Orange Period in Southern Florida's Inland Tree Islands

Orange period (6000–3000 BP) communities in Florida have been defined by the manufacture of fiber-tempered ceramics within eastern Florida and have a well-defined chronology. Orange period communities engaged physically with the landscape through shell and sand terraforming and community mobility. Contrastingly, the Archaic period in south Florida is not adequately defined in chronology nor material culture with the general consensus that fiber-tempered Orange pottery has not been well recorded near Lake Okeechobee. Most of the investigative work around tree islands in southern Florida, identifies Archaic sites as discrete and temporary camp locations, potentially obscuring interregional mobility and habitation of these communities. Recent wetland restoration conducted by the USDA-NRCS identified several freshwater hammock sites with fiber-tempered Orange ware ceramics within southeastern Highlands County. We have been able to identify and preserve a unique arrangement of Orange period sites within a large seasonally wet landscape not previously investigated archaeologically. Historic maps and aerial imagery, high-definition lidar-derived DEM maps, and twentieth-century landscape-use records are used to explore and preserve a large and understudied archaeological landscape. This can help archaeologists to expand regional chronologies of under researched south-central Archaic Floridians.

Raja, Mussa [126] see Bicho, Nuno

Raja, Mussa [225] see Haws, Jonathan

Ralph, Jordan, Burchell Hayes (PKKP Aboriginal Corporation), Terry Hayes (PKKP Aboriginal Corporation) and Grant Wilson (PKKP Aboriginal Corporation)
[235]

The Legacy of the Destruction of Juukan Gorge in Australia

On the 24th of May 2020, mining company Rio Tinto destroyed significant rockshelters at Juukan Gorge, in the western Hamersley Range of Western Australia's Pilbara Region, as part of its iron ore operations. This event had devastating consequences for the Puutu Kunti Kurrama People, who have now lost one of their most important cultural sites. The destruction also had an impact on the heritage and mining industry in Western Australia. The fallout from the blast sent shockwaves around the world. The event attracted global media attention, and condemnation from across the political spectrum. Many asked the question "how could this happen?" The answer was apparent to those of us who operate within the framework of Western Australia's outdated and industry-favoring heritage legislation. Everything from government policy to industry practice and (sometimes) the representation of Indigenous representative bodies was predicated on the assumption that an approval to impact a site will pass without issue, regardless of significance—as state priorities for mining benefits

tended to trump heritage protection. Following the destruction of Juukan Gorge, we talk about the fallout, both from the perspective of PKK Traditional Owners, and from a heritage management perspective.

Ralph, Jordan

[235]

Chair

Ralph, Jordan [235] see Wilson, Grant

Ralston, Clair (University of Nevada, Las Vegas)

[7]

Chair

Ralston, Clair (University of Nevada, Las Vegas), Pamela Stone (University of Massachusetts, Amherst), Debra Martin (University of Nevada, Las Vegas) and Samuel Sisneros (Center for Southwest Research)

[7]

Engaged Bioarchaeology: Centering Descendant Voices in the Excavations of a Historic Mission Church in Belen, New Mexico

An engaged bioarchaeological project includes the Indigenous or descendant community from the beginning of the project, centers their questions, and brings forward their knowledge of the past to create more nuanced conversations about their ancestors. Shifting the focus from solely the goals of the anthropologist to a shared vision of recovering the past is a first step in decolonizing bioarchaeological practices. Our work, conducted at the request of descendant community members, aims to recover the lost history of the founding community of Belen, NM. Excavations revealed the location of the original mission church and resulted in the exhumation of some ancestors buried within and around the church. Our research intertwines descendants' questions with bioarchaeological analyses to offer a deeper understanding of history and lived experiences in a frontier town, the intersections of sociopolitical processes of colonial conquest, and the erasure and resiliency of a community that continues to thrive into the twenty-first century. By engaging with these multiple lines of inquiry, we encounter a broader framework of restorative justice for those marginalized, assimilated, and vanished, while working toward recovery and reinstatement through the testimony of histories from both the ancestors and descendants that have been silenced through colonial practices.

Ralston, Clair [272] see Baustian, Kathryn

Ramadan, Tareq [254] see Ryzewski, Krysta

Ramey, Rebecca [153] see Wagner, Mark

Ramirez, Benjamin (University of Texas Rio Grande Valley), Sarah Rowe (University of Texas Rio Grande Valley), Guy Duke (University of Texas Rio Grande Valley) and Edward Gonzalez-Tennant (University of Texas Rio Grande Valley)

[197]

Getting Creative with Photogrammetry: Adventures in Dos Mangas, Ecuador

Photogrammetry, the science of converting 2D images into immersive 3D models, traditionally adheres to a strict set of guidelines and specialized tools. However, this poster explores the spirited realm of photogrammetry with rule bending and limits to achieve success in Dos Mangas, Ecuador. In this resource-constrained setting, innovators defied convention, proving that unconventional approaches can yield great results. Dos Mangas, known for its limited space and technology, became an unlikely playground for

Photogrammetry. Armed with creativity rather than high-end equipment, demonstrated that the essence of photogrammetry lies not only in sophisticated tools but also in adaptability and creative thinking.

Ramirez, Cristian

[264]

Metamorphoses of Human and Nonhuman Agents within the Shaft Tomb Burials in Ancient West Mexico

This paper will contextualize the diverse range of materials found in several shaft tombs throughout West Mexico. I argue that there are examples of ontological ecologies connected to animals and the seasons by understanding the connections between the landscape and the materials found in the tombs. I explore how the metamorphoses of several animals such as frogs and flies, and the contributions they play in the landscape relate to the mortuary practices of the tombs. I believe that human and nonhuman agents, such as animals and plants, are entangled in a relationship of consumption and transference and that the people of this region were intentional with establishing a space where an infinite cycle of giving and taking was established. By contextualizing materials associated with mortuary practices, iconography, ethnographies, and Mesoamerican codices, we can understand why the specific materials in the shaft tombs were built in the first place, which can also get us closer to understanding their broader networks.

Ramirez, Estevan (Statistical Research Inc.)

[181]

Discussant

Ramírez, Felipe [240] see Ochoa Castillo, Patricia

Ramirez, Zyncli (High Point University)

[117]

Changing Attitudes at Chavín de Huántar (Peru): Archaeology, Heritage, and Landslides

This ethnographic study examines the relationship between the local people of Chavín de Huántar, Peru, and their sense of identity as Chavínos in relation to the national museum, the monument, and the 2022 collapse of the mountain peak Shallapa. Through face-to-face interviews with local townspeople, local workers on two different archaeological digs, foreign archaeologists, and business owners, the study delves into the various opinions of the Chavín National Museum, the memories of the role the Chavín Archaeological Site played in the past, the amount of pride the monument brings now to Chavínos, and the impact of the fall of Shallapa. Using an anthropological lens, this study demonstrates the evolution of the perspective of archaeological sites in a growing town and its impact on the local population.

Ramon Celis, Pedro (Indiana University, Bloomington)

[160]

Chair

Ramon Celis, Pedro (Indiana University, Bloomington)

[210]

An Integrated Approach to Urban and Artifact Analysis of Residential Buildings in Late Postclassic Guiengola, Tehuantepec, Oaxaca

This paper explores ethnogenesis and cultural hybridity by analyzing survey and lidar data in 72 buildings from the Guiengola archaeological site in Oaxaca, Mexico. Specifically, it examines the Zapotec people's domestic construction and pottery assemblages in four areas of this fortified site during the Late Postclassic period (AD 1250–1521). By analyzing the various configurations of domestic buildings on the site, it was possible to understand how the city's settlement evolved over a period of 100 years. Additionally, this study uncovers

the motivations behind the Zapotecs' decisions to keep using, adopting, or creating new pottery styles and how their domestic practices were affected in their new coastal surroundings. The findings reveal the integration between the incoming Zapotec settlers and existing local traditions. This research challenges traditional notions of cultural boundaries and highlights the complexities of cultural exchange. It emphasizes the importance of interdisciplinary approaches in understanding cultural adaptation and assimilation. Ultimately, this research provides evidence of cultural hybridity in the archaeological record and paves the way for further investigations into the mechanisms behind it.

Ramos, Frank [200] see Semanko, Amanda

Ramos Osnaya, Carmen (Centro INAH Michoacán), Emma Bardi (Université Paris I Panthéon-Sorbonne), Bruno García González (Centro INAH Michoacán) and José Luis Punzo Díaz (Centro INAH Michoacán)

[106]

Xanamus and Petroglyphs: A Study of the Construction Techniques of the Tzintzuntzan Yácata Lining System

In the prehispanic city of Tzintzuntzan there are architectural elements that form the main ceremonial center of the last capital of the Tarascan Empire. The best known are the *yácatas*, monumental pyramids of a mixed plan built on the Great Platform, characteristics of the Purhépecha culture. Used by the Tarascan builders as a cladding system, the so-called *xanamus* are unique architectural elements due to their singularities and their arrangement on the exterior walls of the *yácatas*. The present work intends to address the *xanamu* as a characteristic cladding system of Tzintzuntzan architecture. Therefore, the objective is, firstly, to situate the *xanamu* in its constructive function within the Tzintzuntzan *yácatas*. Secondly, their intrinsic characteristics, their implementation on the walls of the *yácatas*, the process by which they were carved, and the possible tools used by the Purhépecha builders will be presented. Finally, a specific analysis of the *xanamus* petroglyphs will allow us to understand the motifs used and the techniques used to carve these engraved images.

Ramsey, James [200] see Jacobson, Jodi

Ramsey, Monica (University of Cambridge) and John Marston (Boston University)

[256]

Starch Spherulites: What We Know and What Is Next for This Promising New Method of Paleoethnobotanical Analysis

Starch spherulites are a promising new paleoethnobotanical discovery. Well-studied in food sciences, starch spherulites form when amylose from plant starch recrystallizes in spherulitic morphology. This requires processing by humans (mainly through heat, although pH impacts this dynamic) in an aqueous environment. The identification of starch spherulites in the archaeological record opens an exciting new line of research into baking, boiling, and other forms of food processing deep into prehistory. With several papers now published, including their initial description, where they were experimentally formed using traditional Maya maize processing techniques of nixtamalization (Johnson and Marston 2020), and their first archaeological identification, at the 23,000-year-old site of Ohalo II, Israel (Ramsey and Nadel 2021), followed by their discovery at a Maya site (Santini et al. 2022) and their recent recovery from early Pottery Neolithic ceramics in the Southern Levant (Ramsey n.d.), it is clear that starch spherulites will be found in many contexts and regions around the world. Accordingly, there is a need to outline best practices and begin a broader discussion with other interested paleoethnobotanists to establish a solid methodological foundation. To that end, this paper summarizes our current understandings of spherulite formation and preservation and outlines future research directions.

Ramsey, Monica [256] see Pugliese, Melanie

Ramsier, Marissa [80] see Slusarska, Katarzyna

Rand, Asta (Cardiff University) and Richard Madgwick (Cardiff University)

[334]

Movers or Moved? An Iso-histological Approach to the Postmortem Movement of Prehispanic Maya Human Remains
Death was not the end for many members of prehispanic Maya communities (250 BC–1560 AD). Indeed, the inclusion of human remains in structures that continued to function indicates that the dead (or their significance to the living) maintained social if not biological vitality. Although there is also ample evidence that Maya people re-entered burial contexts in the past, displacing human remains in the process, researchers assume that isotopically nonlocal people from such contexts were movers during life. The possibility that they were moved after death remains understudied yet has significant implications for understanding past migration processes. The innovative iso-histological approach therefore integrates isotopic and histological analysis to distinguish between Maya movers during life and those moved after death. This will refine current isotopic interpretations of Maya migration processes in the past, as the sociocultural motivations underpinning each of these behaviors differed. This approach will also shed light on body treatments among the prehispanic Maya that would have facilitated the movement of human remains (e.g., excarnation, bundling). Importantly, this research is not limited to Maya archaeology but offers a framework for applying the iso-histological approach for assessing the posthumous movement of human remains in other archaeological and forensic contexts.

Randall, Asa (University of Oklahoma)

[331]

Intervening Impersistence on the St. Johns River, Florida

The shell mounds of the St. Johns River basin in northeast Florida are among some of the longest-lived places in North America. The repeated occupation over 9,000 years in duration attests to the attention paid to these places through depositions and encounters. Depositional histories reveal how places grounded histories by enabling compendia of biographies, things, times, and otherworldly powers to be encountered in place. Yet, close attention to the contexts of inhabitation reveals tensions and anxieties when places were left alone and then returned to. These tensions speak to broader anxieties regarding the inherent impersistence of places, and the need to intervene on their behalf to ensure they are returned to the broader landscape.

Ranere, Anthony (Temple University)

[222]

Contributions of the Proyecto Santa Maria (PSM) to the Prehistory of Central Pacific Panama and Beyond

The PSM was a multidisciplinary project in Central Pacific Panama with the major fieldwork carried out during the years 1981 through 1986. The goals of the proposed research were to identify the relationships between settlement types and subsistence strategies in the range of environmental zones found in the Rio Santa Maria watershed from the first entry of humans into the region until the appearance of permanent large agricultural villages. In order to record a representative sample of sites, random transects (500 m wide) were selected for survey in each of the five environmental regions in the watershed stretching from the coast to the continental divide. Additional purposive surveys were made along coastal shorelines, around lakes and in rockshelters. During the course of the project 430 of the 510 sites documented were found in the transects. The results have challenged traditional views about the peopling of the region and shed light on the early development of agriculture and complex societies in the Americas. This paper focuses on the impacts that PSM research has made on the prehistory of Central Pacific Panama, the Isthmo-Colombian region and the American tropics in general.

Rangel, Esteban (University of New Mexico) and Heather Edgar (University of New Mexico)

[197]

There's an App for That: Cost-Effectiveness of Lidar/Photogrammetry Smart Phone Applications for Virtual Osteology

The use of three-dimensional (3D) models for skeletal analysis has become common practice for osteological research. However, current methods for obtaining the 3D models are either too costly, such as computer tomography (CT), or require time-consuming postprocessing such as scanners or cameras. Recent advances in technology have resulted in the development of affordable 3D image-capturing methods using smartphone applications. Structure-from-motion (SfM) photogrammetry and lidar software applications such as Scaniverse and Polycam, coupled with the increased quality of high-resolution cameras in smartphones can provide an alternative to conventional methods of capturing osteological data. The study involves cranial 3D models from the Maxwell Museum of Anthropology documented forensic collection created with an iPhone using the two applications. Existing CT scans and 3D models from a surface scanner will also be included in the study. A suite of landmark data and craniometric measurements will be collected from each 3D model and compared against physical measurements using statistical analysis to determine the degree of accuracy of each model. The results will offer a low-cost alternative method of documenting skeletal collections in places where a scanner or CT imaging is not an option such as in situ archaeological contexts or remote osteological repositories.

Rankin, Caitlin (Illinois State Archaeological Survey), Erin Benson (Illinois State Archaeological Survey) and Michael Kolb (Strata Morph Geospatial Inc.)

[328]

Using Geospatial Methods to Identify Intact Buried Mounds at the Mitchell Site, Illinois

The Mitchell site is a major Mississippian (1050–1400 CE) mound center located roughly 10 km north of Cahokia Mounds, Illinois, the largest mound center in North America. At a minimum, Mitchell consisted of 11 earthen mounds; however, only one mound is visible today. In 1960, salvage investigations, including limited mound excavations and widespread trenching across other areas of the Mitchell site, were conducted in advance of new interstate (I-270) construction. As this work occurred prior to the National Historic Preservation Act, several of the mounds were bulldozed and utilized for highway construction fill, and three were left partially intact but were buried under highway cone fill. In advance of current Illinois Department of Transportation (IDOT) proposed lane widening of I-270, the Illinois State Archaeological Survey (ISAS) had the opportunity to review notes and materials from the 1960s salvage excavations and conduct new geospatial investigations to determine the extent of remaining intact mound deposits. Employing minimally invasive terrestrial sediment coring, lidar analysis, and historic image review, we determined intact mound deposits are likely preserved underneath modern fill at several documented mound locations. This recent work allows for more informed preservation and avoidance planning to protect the mounds from further destruction.

Rankin, Lisa [307] see Kelvin, Laura

Rankle, Chad (University of California, San Diego), Hector Neff (California State University, Long Beach), Virginie Renson (University of Missouri) and Gina Buckley (University of Algarve)

[188]

A Multisite Assessment of Mobility in Coastal and Interior Nicaragua through $^{87}\text{Sr}/^{86}\text{Sr}$ Analysis

Migration and mobility have long been topics of interest in Nicaraguan prehistory, but research addressing these inquiries in the Greater Nicoya has relied primarily on linguistic analyses and the comparison of artifact typologies. Archaeological science is increasingly benefiting from the use of strontium isotope analysis as a proxy for mobility and migration. Here, we present the most thorough strontium isotope analysis of human remains and environmental baseline samples in Nicaragua to date. We analyzed strontium isotope ratios of 50 human teeth, primarily first molars, from 11 archaeological sites in four regions along Nicaragua's Pacific coast and interior. We identified isotopic outliers and compared them to a strontium isoscape we constructed through the analysis of 40 vegetation samples along the coast. While the majority of individuals we analyzed appear to match their local signature, we identified several potential immigrants and discuss their origins in this presentation. Our study offers a new approach to consider mobility in this historically understudied region. ***This presentation contains images of human remains.

Rankle, Chad [69] see Buckley, Gina
 Rankle, Chad [157] see Neff, Hector

Ransom, Jeff [229] see Ayers-Rigsby, Sara

Rapp Py-Daniel, Anne [54] see Stabile, Rafael

Rasbury, E. Troy [36] see Iorga, Anastasia

Rasic, Jeffrey (National Park Service), Norman Easton (Yukon University), Christian Thomas (Yukon Tourism and Culture Heritage Resources Branc) and Robert Sattler (Tanana Chiefs Conference)

[120]

Obsidian Networks of the Southern Yukon-Alaska Borderlands

The archaeological record of Eastern Beringia (Alaska and Yukon) plays an important role in understanding global human dispersals and settlement and is a proving ground for testing ideas about high-latitude hunter-gatherer land use, technology, and socioeconomic interaction. Obsidian provenance studies provide an excellent means to address these issues. More than 60 geochemically distinct obsidian groups have been recognized throughout Eastern Beringia. Three of the most important sources—Wiki Peak, Mount Edziza, and Hoodoo Mountain—are confined within or are adjacent to the Yukon-Alaska borderlands and provide insights into people's movements and interactions across major drainage systems and ecoregions through time. We describe these obsidian sources and patterns in their use based primarily on the stratified and well-dated record from the Little John site, which was first occupied ca. 14 Kya. We share insights from both Little John and the regional small site record to suggest (1) a rapid pace of landscape learning and identification of obsidian sources upon initial human colonization, (2) the strong influence raw material package size exerts on obsidian distribution, and (3) effects of volcanic eruptions on raw material procurement and transport.

Rasic, Jeffrey [120] see Sattler, Robert

Rasic, Jeffrey [120] see White, John

Rasmussen, Amanda [44] see Lewis-Schroer, Keely

Rathgaber, Michelle [45] see Zabecki, Melissa

Rathgaber, Michelle, Jared Pebworth (Arkansas Archeological Survey) and Michael Evans (Arkansas Archeological Survey)

[294]

Using Experimental Archaeology to Engage the Public in Arkansas

One aspect of the Arkansas Archeological Survey's mission is "to share what we learn with the people of Arkansas." But how do we share and explain larger concepts such as innovation and technique changes in hunting or gardening when all we have archaeologically is a broken spearpoint or a resharpening flake from a hoe blade? Experimental archaeology and replication of tools has been essential to answering this question in Arkansas. People will stop at a table showing replica tools almost immediately upon seeing it and most people are excited when offered the opportunity to actually try out the tool. After a couple of attempts at throwing a spear with an atlatl or using a pump drill, engagement and questions abound. When these activities are

done in small groups, constructivist, collaborative, and reflective pedagogical approaches are utilized. Participants have experiences that lend themselves to better understanding how the technologies work and bring these up to help other participants understand things as well. Students and members of the public come away from engagement with experimental archaeology and replica tools with an appreciation of the skill and innovation it took to design those technologies and with more respect for Native American ingenuity.

Rautman, Marcus [121] see Czujko, Stephen

Rawski, Zoe (ASM Affiliates), Tucker Austin (ASM Affiliates), Brennan Bajdek (ASM Affiliates) and Nick Doose (ASM Affiliates)

[265]

Mitigation and Preservation: Salvage Data Recovery at Poacher's Ridge, Oregon

[WITHDRAWN]

Ray, Erin (University of New Mexico), Nadia Neff (University of New Mexico), Viorel Atudorei (University of New Mexico) and Keith Prufer (University of New Mexico)

[194]

Diachronic Analysis of Sequential Enamel Stable Isotope Analysis in Human Populations

The agricultural-demographic transition highlights a positive correlation between increasing consumption of agricultural products and population. However, this correlation varies regionally. In Eurasia, agriculture and population growth coincide with increasing sedentism hypothesized to drive population change. In the Amazon, agriculture and sedentism likely preceded population growth. Modeling suggests population shifts are dependent on increasing fertility, carrying capacity, and decreasing mortality. We explore the relationship between age-at-weaning as a proxy for inter-birth interval and relative population change in the neotropics during the transition to agriculture. If inter-birth interval decreases through time, this may indicate increased fitness and fertility. We present preliminary results of sequential-enamel sampling of phosphate by laser-ablation to create community-level diachronic sets of oxygen ($\delta^{18}\text{O}$) and carbon ($\delta^{13}\text{C}$) values as a proxy for early childhood diet using multi-tooth dental samples of adult individuals from two rockshelter sites in modern-day Belize. A relative change in $\delta^{13}\text{C}$ sample values correlated to early life stages indicates the introduction of solid foods. A relative change in $\delta^{18}\text{O}$ sample values indicates weaning cessation. An age-at-weaning estimate based on isotopic changes relative to dental mineralization age is calculated for each individual. Changes in the timing of weaning may indicate a mechanism for population change.

Ray, Erin [201] see Neff, Nadia

Raymond, Tiffany [24] see Alvey, Jeffrey

Razgil'deeva, Irina [93] see Buvit, Ian

Razo, Mikaela (Center for Archaeological Research, University of Texas, San Antonio) and Cindy Muñoz (Center for Archaeological Research, University of Texas, San Antonio)

[100]

The Use of Legacy Collections as Education Opportunities for Undergraduate Student Internships

The Center for Archaeological Research (CAR) at the University of Texas, San Antonio (UTSA) offers semester long internships to undergraduate students from UTSA's Anthropology Department. The internship program offers students an opportunity to gain hands-on experience in laboratory methods, independent research, curation standards, and collection management. Students work on CAR's legacy collections—i.e.,

older projects in need of rehabilitation—under the supervision of archaeological professionals. This work is mutually beneficial, resulting in rehabilitated collections for CAR and experience with real-world applications, career development, and skill acquisition for the students. Based on individual interest, each student completes a final project involving a rehabilitated collection. This poster provides summaries and displays data gathered by CAR student interns from projects completed on the Baker Cave collection.

Reamer, Justin (University of Pennsylvania)

[228]

Beyond the Fields: Lenape Domesticated Landscapes in the Minisink National Historic Landmark

Discussions of Indigenous agricultural systems in the northeastern United States have focused almost exclusively on the cultivation of maize, beans, and squash. General models focus on the cultivation of these plants in ridged fields or fields of small hillocks. While the fields and crops grown within them are important, I argue they are only one part of a larger domesticated landscape. Using data from the Minisink National Historic Landmark, I focus on how the Lenape created a domesticated landscape into which agricultural fields were integrated and became central too. I argue Lenape agricultural systems probably have their root in agroforestry practices focused on enhancing mast nut production that originated during the Late Archaic. Drawing on paleoethnobotanical and landscape data, I argue that Lenape agricultural systems were not focused solely on domesticated plants as traditionally defined but also included the encouragement, maintenance, and cultivation of disturbance adapted species growing on the edge of their fields. In particular, I focus on the cultivation of ruderal plants and fleshy fruits. I argue that to better understand the complexity and utility of Indigenous agricultural systems in the Northeast, the full extent of how Indigenous people domesticated their landscapes must be realized.

Rebardi, Haley, Meradeth Snow and Bryon Schroeder

[98]

Repatriation and a Biological Profile of Indigenous Remains of West Texas

The subject of this study is an Indigenous precolonial individual from southwest Texas. The individual was obtained from a private collector and is dated to the Archaic. With tribal approval and support an emphasis has been made to establish an ancestral profile with the end goal of repatriation. To facilitate this, the Indigenous individuals in the region have requested a biological profile to gain insight into the individual's life. Analyses of mitochondrial DNA haplogroups and stable isotopes $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ are included in this process. $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ isotopes result from the population's diet and crops that were relied on. Mitochondrial DNA haplogroups give insight into population relationships and potentially establish ancestral ties with modern populations today. With permission, consent, and transparency the haplogroup is compared with modern Indigenous individuals of west Texas. Repatriation is the main goal of analyses while confronting the handling and trafficking in today's world of Indigenous ancestors obtained from private collectors and other establishments.

Reber, Eleanora [128] see Arroyo, Barbara

Reckin, Rachel (Montana Fish, Wildlife and Parks)

[219]

The Role of Lactating Mothers in High-Elevation Seasonal Occupational Durations in the Rocky Mountains

The study of high-elevation archaeology in the Rocky Mountains continues to enhance our understanding of the seasonal rounds of precontact hunter-gatherers in the region. Yet the specific seasonality and quantity of time Indigenous people spent at high elevations each year is unclear. Ethnographically, we know that hunter-gatherers in general, and Native Americans in particular, spent summer months in extended family groups. Because of the demographics of hunter-gatherers, and the tendency of hunter-gatherer women to breastfeed each child for 3–4 years, most family groups would have contained a lactating mother. Interdisciplinary

medical and anthropological research indicates that lactation is physically expensive, demanding additional calories, vitamins, and nutrients, while high-elevation environments increase demands on the body through hypoxia, cold temperatures, and difficult topography. This paper hypothesizes that, if there is a physiological limit to how much time a family group could spend hunting and gathering at high elevations, the needs of the lactating mother would provide that limit. Additionally, I hypothesize that her needs would direct the kinds of resource procurement the group would prioritize.

Recklies, Laura (Oregon State University), Loren Davis (Oregon State University), Daniel Bean (Oregon State University) and Alexander Nyers (Northwest Archaeometrics)

[197]

Provenance and 3D Geometric Morphometry of a Large Obsidian Biface Cache from Central Oregon: Preliminary Perspectives

Caches of stone tools offer unique opportunities to study lithic technology crafting at extremely short temporal scales. We created digital 3D models of 378 obsidian bifaces from a cache located in central Oregon (35DS751) and submitted them for X-ray fluorescence and geometric lithic morphometric research (GLiMR) analyses. The raw materials from this cache were from local eruptive sources. In this poster, we explore ways in which 3D scanning and geometric morphometry can be used to extend traditional lithic tool studies of technological design and lithic production sequences.

Recuero, Taylor (University of North Carolina, Charlotte), Sara Juengst (University of North Carolina, Charlotte) and María Ordoñez Alvarez (Universidad San Francisco de Quito)

[70]

Exploring the Question of Heterarchy versus Hierarchy at Urcuquí, Ecuador

Heterarchical and hierarchical power distributions in a society affect the distribution of labor within that society. In a heterarchical society, the labor is generally reciprocal community labor used to maintain a cooperative relationship despite distance between lived settlements (Scaffidi 2020), whereas hierarchical societies will have labor distributed in higher amounts to those with the least amount of power and vice versa (Crumley 1979). Urcuquí is a population located northeast of Ibarra, in the northern highlands of Ecuador, occupied from AD 500 to 1500 and was commonly thought to be a part of the chiefdom of Otavalo (Salomon 1986). Labor was an important part of the sustainability of Urcuquí, and previous research has noted collective labor in the region in earlier time periods (Sharp 2020). Skeletal analysis of human remains for osteoarthritis, enthesal changes, linear enamel hypoplasia, and paleopathological lesions associated with infectious disease allow insight into past patterns of labor and demonstrate how labor was organized at Urcuquí. In this poster, we will present the patterns of activity and labor based on skeletal analyses of 33 burials from Urcuquí to investigate power distributions for this society. Photos of human remains.

Redfern, Rebecca [22] see DeWitte, Sharon

Redman, Kimberly (Alpine Archaeology) and David Guilfoyle (Applied Archaeology International)

[254]

Who's "Public"? Whose "Outreach"?

Within CRM, completing public outreach as part of a mitigation program is common practice. Public outreach is an important mechanism to engage the public, but generally centers on archaeologists educating the mainstream public through books, fliers, signs, and videos. For the CDOT 550/I60 Interchange Project, the consulting parties agreed that appropriate mitigation should include a combination of archaeological data recovery, tribal engagement, and the production of a film. Ultimately, mitigation moved beyond obtaining and sharing archaeological information, into a program that sought to support the affected tribal communities through partnerships between tribal elders, tribal youth, cultural specialists, and professional archaeologists.

The project funded tribal interns during their training by tribal elders, cultural specialists, and archaeologists equally. The intent of the program was to value multiple perspectives, democratize the narratives, and provide equal funding opportunities for traditional and archaeological knowledge transmission. This multidirectional system was enriching to tribal youth and professional archaeologists and was further bolstered by the publicly available film that recognized tribal perspectives alongside archaeological ones, providing a more holistic understanding of these places.

Reed, Denné [308] see Coco, Emily

Reed, Emily [20] see Blecha, Erika

Reed, Matt [33] see Bamforth, Douglas

**Reed, Paul (Archaeology Southwest)
[167]**

Putting Archaeology Southwest's Indigenous Collaboration Model into Practice: A New Mexico Example

Archaeology Southwest is undertaking an Indigenous Cultural Landscape Report for Petroglyph National Monument, just west of Albuquerque, New Mexico. The work at Petroglyphs involves a number of goals, including tracking and documenting the physical, natural, and cultural history of the 7,200 acres comprising the monument. A large component of the research is assessing the monument, either as whole or in parts, as a Traditional Cultural Property/Place—a TCP. As part of this assessment process, working with monument staff, we have engaged many tribal groups. Petroglyph National Monument has 29 Pueblos and Tribes who have self-identified as affiliated and interested groups. A large component of our work over the last two years has been outreach and engagement with many of the Tribes. To date, significant interaction is ongoing with 21 of the 29 affiliated Tribes, through virtual and in-person meetings, field visits and inspections, and visits to tribal headquarters. This presentation will briefly describe Archaeology Southwest's Indigenous Collaboration Model and its implementation via creation of an Indigenous Cultural Landscape Report (ICLR) for Petroglyph National Monument.

Reed, Timothy [150] see Clark, Andrew

**Reeder-Myers, Leslie (Temple University)
[305]**

Collecting Colonialism: Disembodied Culture at the Temple Anthropology Laboratory and Museum

Like many small- to medium-sized anthropology departments in North America, Temple University houses a collections repository with a complex and poorly documented past. Beginning in the 1950s, more than 200 collections accumulated with limited direction, including ethnographic collections, archaeological collections, and several collections that defy geographic or thematic categorization. The laboratory and repository built in 1973 is now obsolete and we are at a pivotal point in finding a new identity within the university as an exhibition and teaching space. This includes understanding how our collections should and should not be used in the future. As a case study, I will discuss the development of an exhibit, *Collecting Colonialism: Disembodied Culture at the Temple Museum*. Students critically examined two collections that include a variety of unrelated archaeological, ethnographic, and unclassified objects. By allowing students to explore and present the ethical concerns associated with these collections, they gained experienced navigating the real conundrums and difficulties faced by museums of all sizes and descriptions. Although I am still uncertain of the long-term value in maintaining these collections, the challenges I struggle with as a museum practitioner were valuable teaching tools to prepare students for the often-messy world of museum collections.

Reedy, Chandra (University of Delaware)**[255]***Discussant***Reedy, Chelsea (Texas State University; HDR Inc.)****[268]***Food and Fortitude: A Story of Life within Presidio San Sabá as Told through Zooarchaeological Analysis*

Presidio San Sabá was the largest military outpost in the Texas region during the mid-eighteenth century. This research project is a continuation of Arlene Fradkin and Tamra Walters's previous faunal analysis conducted on a portion of the site's assemblage. This inquiry will focus on comparing the areas within the interior plaza to provide insight into dietary practices and to see if socioeconomic status use of certain areas can be inferred. It is documented that different communities (military, religious, ethnic) were residing in specific parts of the fort. Comparing these areas will provide insight into dietary practices and even dietary differences between varying communities. This faunal analysis of the presidio's assemblages will attempt to determine the people's use of wild versus domestic resources, aquatic versus terrestrial resources, element selection, butchery practices, size class, and hunting practices.

Reents-Budet, Dorie (National Museum of Natural History, Smithsonian Institution), Ronald Bishop (National Museum of Natural History, Smithsonian) and Bernard Hermes (Proyecto Arqueológico Nakum, Isla de Flores)**[251]***Innovation, Not Imitation: The Classic Period Ceramics of Belize*

Entertaining the initial assessment of Belize as a secondary outpost of ancient Maya culture, Belize's subordinate role should be reflected in its ceramic record based on conventional archaeological assumption. However, research since the 1980s proves this to be untrue. Our paper presents an overview of compositional trends in Belizean ceramic paste composition obtained by neutron activation analysis, with a consideration of stylistic and typological categories. Combined with our colleagues' excavation data and pottery analyses, the ceramic record reveals Belizean sites to have been vital Classic period players on the ancient Maya stage, producing unique pottery and participating in ceramic artifact circulation and political interaction throughout the ancient Maya world.

Rees, Mark (Louisiana Public Archaeology Lab, University of Louisiana, Lafayette) and D. Ryan Gray (University of New Orleans)**[1]***Archaeology in the Unfolding Aftermath: Creative Mitigation of Anthropogenic Disasters in New Orleans and the Mississippi River Delta*

Louisiana has been called a state of disaster. The flooding of New Orleans in the wake of Hurricane Katrina in 2005 drew national attention to the effects of social inequalities, unpreparedness, and key vulnerabilities. Five years later, a catastrophic explosion on the Deepwater Horizon drilling rig produced the largest marine oil spill in history. Hurricane Ida in 2021 devastated parishes in the Mississippi River petrochemical corridor sometimes referred to as "Cancer Alley." Environmental, economic, and infrastructural impact response and recovery in the aftermath of those disasters involved cultural resource management (CRM) archaeology, including site monitoring and alternative mitigation. These events transpired in the context of coastal erosion, subsidence, sea-level rise, and intensifying storm surges. Archaeological perspectives on landscapes and deep history reveal such engineered disasters are inextricably linked to anthropogenic environmental changes and social inequality. An archaeology of disaster and equity focused on environmental justice and the heritage of vulnerable communities requires creative mitigation rarely pursued in CRM.

Rees, Mark [165] see Johnson, Erlend

Rees, Mark [104] see Church, Gloria

Reese-Taylor, Kathryn, Armando Anaya Hernández (Universidad Autónoma de Campeche), Nicholas Dunning (University of Cincinnati), Verónica Vázquez López (Universidad Nacional Autónoma de México) and Fernando Flores Esquivel (Universidad Nacional Autónoma de México)

[78]

Sustainable Urbanism in the Maya Lowlands: Thirteen Years of Research in the Bajo el Laberinto Region, Southern Campeche

Since 2011, a multidisciplinary team of researchers has been investigating the development of dense urbanism along the southern edge of the Bajo el Laberinto. Anchored by Yaxnohcah in the east and Pared de los Reyes in the west, the area was settled at ca. 900 BCE and occupied until ca. 1500 CE, constituting one of the longest cultural histories in the Maya Lowlands. In addition, it supported very dense populations throughout the Classic period, with new communities and neighborhoods appearing, possibly linked to an expanding market economy. The long-term occupation of the region was supported with sustainable environmental practices over millennia, punctuated by modifications in land-use strategies at critical junctures. In this paper, we highlight the major findings of our 13 years of research in the Bajo el Laberinto area focused on Yaxnohcah and present our interpretations regarding the intersection of population dynamics, political economies, and land-use strategies during significant cultural crossroads. These findings lay the foundation for our ongoing research in the area, which has become a regional endeavor that also encompasses the northern rim of the Bajo el Laberinto centered on the prominent city of Calakmul.

Reese-Taylor, Kathryn

[292]

Discussant

Reese-Taylor, Kathryn [128] see Guernsey, Julia

Reese-Taylor, Kathryn [31] see Lentz, David

Reese-Taylor, Kathryn [78] see Lockett-Harris, Joshua

Reese-Taylor, Kathryn [78] see Longstaffe, Matthew

Reese-Taylor, Kathryn [31] see Meyers, Stephanie

Reese-Taylor, Kathryn [31] see Montgomery, Shane

Reetz, Elizabeth (University of Iowa Office of the State Archaeologist)

[64]

Moderator

Reetz, Elizabeth (University of Iowa Office of the State Archaeologist)

[254]

Co-creating Knowledge about Iowa Sites and Increasing Awareness of Iowa's Descendant Tribes through Community-Engaged Archaeology

In June 2023, the University of Iowa Office of the State Archaeologist (OSA) completed a yearlong project for the University of Iowa (UI) Community Engaged Scholars Program in collaboration with the Elgin Historical Society & Museum (EHS) and Meskwaki Nation. The partners aimed to share knowledge about archaeological and historical sites along the Turkey River in northeast Iowa, which is archaeologically very dense but sorely under-documented. The project was prompted by an inquiry to OSA from the EHS who recognized that many area residents had large family artifact collections, but the people with contextual knowledge were aging and sadly passing away. In an effort to encourage community members to share their guarded knowledge and document these sites, the partners organized four community events, including two events called an "Archaeo-blitz" where local residents worked with professional archaeologists to identify their artifacts, record site locations, and learn collections care tips. These events included Meskwaki and Ho-Chunk Nation historians, artists, and dancers, whose participation encouraged public involvement and reinforced for both local residents and Native people the continuing Tribal interests in the area. This paper communicates project outcomes and reflections from the collaborative team.

Reeves, Jonathan (Max Planck Institute for Evolutionary Anthropology), Matthew Douglass (University of Nebraska, Lincoln), Lydia Luncz (Max Planck Institute of Evolutionary Anthropology), Benjamin Davies (Tufts University) and Emmanuel Ndiema (National Museum of Kenya)

[126]

Perspectives on the Organization and Use of Lithic Technology: A Modern Ethnographic Case Study in East Turkana, Kenya

Expedient technology has taken on several meanings within the study of stone tools. However, the range of behaviors associated with the term expedient and its manifestation in the archaeological record is dependent on the socioecological and functional contexts in which technology is used. Acquiring a deeper understanding of such contexts is challenging, given the infrequent opportunities to observe stone tool production and utilization within extant systems. In 2018, we began working with Daasanach pastoralists in Northern Kenya to document stone tool use from an ethnographic perspective. The Daasanach maintain a core-and-flake technology for use in a variety of functions within the context of herding livestock in remote settings. Over the last three years, we have undertaken extensive interviews with modern tool users and have observed the processes of stone tool production, utilization, and discard. While the Daasanach use of lithic technology could be considered expedient, it is integrated into a complex foraging strategy and cultural framework whose archaeological manifestation is conditioned by the broader availability of stone in the places where they live. The complex interaction of culture, ecology, and material patterning described by this study questions the relationship between the archaeological record and the complexity of the technological system.

Regnier, Amanda (University of Oklahoma)

[279]

Chair

Regnier, Amanda (University of Oklahoma), Scott Hammerstedt (University of Oklahoma) and Patrick Livingood (University of Oklahoma)

[279]

Reintroducing Spiro Mounds

Spiro Mounds, located in eastern Oklahoma, is known almost solely for the spectacular collection of well-preserved ritual objects unearthed when looters tunneled into the Craig Mound in the 1930s. The dramatic story of the looting and subsequent dynamiting of the Craig Mound has led many archaeologists to believe the site has no remaining intact archaeological deposits. This paper, intended for those unfamiliar with the site or recent work there, will provide an overview of Spiro as a much larger ritual center among many related mound sites using what we have learned from geophysical survey and recent excavations at the site.

Regueiro Suarez, Pilar (Tulane University)

[230]

Political Dynamics through the Discourse of the Baah Sajal of Yaxchilan

During the eighth century, the stone monuments of Yaxchilán and its area of influence recurrently recorded individuals with the title *sajal*, a position associated with leaders of corporate groups with functions related to the government of peripheral sites, administration, war, and circulation of goods. Among all the *sajals* of Pa'chan, only K'an Tok' Wayaab held the appellative *baah sajal*, "principal *sajal*," a position that allowed him to appear on the monuments of the most important buildings in the city, such as Structure 33, to demonstrate their rank vis-à-vis other influential groups. In this way, the present paper aims to analyze how K'an Tok' Wayaab exposed his hierarchy through the monumental discourse on the Hieroglyphic Stairway 2 and, above all, the consolidation of Structure 1 as a possible seat of its corporate group within Yaxchilán. This analysis will also allow an understanding of the *sajals'* role in the political dynamics of Yaxchilán toward the last years of this capital.

Reich, Arielle (University of Illinois, Urbana-Champaign)**[143]***Discussant*

Reich, David [311] see Comer, Elizabeth

Reid, Amy (Center for Archaeological Studies, Texas State University)**[332]***The Documentation, Conservation, and Exhibition of the Skiles Collection*

The Skiles Collection, named for landowner Jack Skiles, consists of Indigenous, Euro-American, and Asian-American cultural material from the Lower Pecos Canyonlands Archaeological region. Beginning in the late 1930s, the Skiles Family amassed an exceptional collection of cultural material representative of the Indigenous peoples who once lived in the canyon where significant archaeological sites such as Bonfire Shelter, Kelly Cave, Skiles Shelter, and Eagle Cave have been recorded, and of the historic laborers associated with the second transcontinental railroad. The Indigenous component of the Skiles Collection includes a wide array of artifacts made of faunal bone and lithic, as well as uniquely preserved perishable artifacts. Over multiple generations, the Skiles were consistently good stewards of the archaeological sites located on their property, and in 2016 the private collection was relocated to the Center for Archaeological Studies at Texas State University (CAS) for an evaluation, limited conservation, and temporary curation. This paper provides an overview of the collection's contents and condition, and an account of CAS's work evaluating, rehousing, documenting, and conserving the Skiles Collection. The collection's research and educational value will be discussed, as well as the *Ancient Life in the Lower Pecos Canyonlands* exhibition that resulted from it.

Reid, Amy [281] see Smith, Heather

Reid, David (University of Illinois, Chicago) and William Ridge (University of Illinois, Chicago)**[86]***The State of Andean Obsidian Artifact Provenance: A Social Network Analysis (SNA)*

Obsidian was both a common domestic good and a highly sought-after exotic material imbued with ideological significance in the past. In the south-central Andes of Peru and Bolivia, obsidian procurement and distribution greatly expanded during the Middle Horizon (CE 600–1000), contemporaneous with the expansionary states of Wari and Tiwanaku. This paper reviews the contribution of the Field Museum's Elemental Analysis Facility (EAF) in the study of Andean obsidian provenance over the last two decades. Using pXRF and LA-ICP-MS, the EAF has generated hundreds of new data points on the movement of obsidian across disparate geographic zones and social boundaries. Here, social network analysis (SNA) is used as an exploratory tool to investigate broad-scale patterning of obsidian procurement and distribution. Results are explored in relation to the social role of obsidian within the political and ritual economies of expansionary states and bottom-up exchange networks that linked disparate regions at this time. Trends within the obsidian "big data" are further analyzed considering geographic proximity to obsidian sources and GIS-modeled mobility routes.

Reilly, Matthew (City College of New York)**[258]***An Archaeology of Return? African Diaspora Heritage in the Wake of the Slave Trade*

Analytical vectors of the African Diaspora have traditionally run east-to-west, charting the journeys of captive Africans from Sub-Saharan homelands to spaces and systems of racial violence in the Americas. Historical archaeology continues to shed light on the realities of such experiences across the spectrum of oblivion and resistance, though displacements and diasporas that navigate different currents across the Atlantic remain underexplored. In this paper, I draw from sites of ongoing research in Liberia and Barbados to suggest not new mappings of the African Diaspora, but new imaginings, journeys, and emancipatory projects to suggest

what an archaeology of return might look like. Beyond the vectors of movement for people and things, I argue that an archaeology of return must be a project of heritage and racial justice.

Reilly, Matthew [327] see Bloch, Lindsay

Reilly, Sophie (Northwestern University)
[223]

Strategizing Food Security under Colonial Rule at Purun Llaqta del Maino, Chachapoyas, Peru

How does colonialism impact local food strategies? This paper considers this question at Purun Llaqta del Maino (PLM), Chachapoyas, Peru; a site with continuous occupation from the Late Intermediate period (LIP; AD 1000–1450), the Late Horizon (1450–1535), and the early Spanish colonial period (1535–1700). Like many Andean regions, Chachapoyas was colonized in the sixteenth and seventeenth centuries by the Inka and Spanish in quick succession. Such colonial expansions can affect food systems by introducing new foods, extracting food and labor through taxes, and introducing or reifying inequalities that alter food access. I present archaeobotanical results from household and public contexts from the LIP through Spanish colonial occupation to investigate variation in food availability and access over time. I consider availability a measure of food acquisition on a community-wide scale, which I measure by tracing ubiquity of plants through time. Access, on the other hand, relates to households' ability to acquire available foods and I employ intrahousehold comparison to trace access. Combining data on availability and access, I consider how imperial impositions affected PLM foodways as well as the strategies that inhabitants employed to negotiate these changes with their biological and cultural needs for adequate foods.

Reilly, F. Kent, III [135] see Dalton, Jesse

Reindel, Markus [299] see Mader, Christian

Reinhardt, Abigail (Texas State University), Trey Lasater (Texas State University) and Heather Smith (Texas State University)
[316]

Remote Sensing Survey at Spring Lake, San Marcos, TX

Spring Lake forms the headwaters of the San Marcos River. The area surrounding the lake has hosted prehistoric peoples since the Paleoindian era and remains a place of cultural reverence for contemporary Indigenous communities. In the early twentieth century, an amusement park, hotel, and golf course were built around the lake which brought thousands of patrons to the area for decades until its eventual sale to Texas State University (TXST). Today TXST oversees its preservation and conservation, as well as education and research initiatives related to this important resource. To understand evidence of the history of the anthropogenic landscape preserved in buried contexts at one of several archaeological sites associated with the lake, 41HY160, we used a 400-megahertz ground-penetrating radar (GPR) to detect surface and subsurface anomalies and GPR-SLICE to analyze resulting geospatial data. We present our reconstruction of the historic golf course and discuss the impact of the course's features and infrastructure on archaeological deposits. Conclusions will summarize the utility of this data and approach to archaeological research at Spring Lake.

Reininghaus, Lee (Wrangell St.-Elias National Park and Preserve) and Allyson Pease (Wrangell-St. Elias National Park and Preserve)
[120]

Recent Archaeological Investigations of Wiki Peak and the Beaver Creek Drainage

The headwaters of Beaver Creek are located in the Nutzotin Mountains in northeastern Wrangell-St. Elias National Park and Preserve. Beaver Creek originates at Beaver Lake near the community of Chisana and

flows east to the to the Alaska-Yukon border before heading north to join the White River. An important feature of the Beaver Creek headwaters is the Wiki Peak obsidian source. Wiki Peak obsidian has been found at some of the oldest archaeological sites in Eastern Beringia and continued to be transported over long distances until the late Holocene. This implies a long history of human activity in the Beaver Creek area. Another unique attribute of the headwaters area is the presence of an extensive tephra layer known as White River Ash. Two eruptions, stemming from Mt. Churchill approximately 1147 and 1830 cal BP, are thought to have caused large-scale ecological changes and may have caused the displacement of people living in the area. Past archaeological research in the headwaters area has been geographically limited in scope. Recent investigations by the National Park Service were focused on providing a more comprehensive view of past human interactions with the headwaters of Beaver Creek and the greater Wiki Peak landscape.

Reinman, Lauren [68] see Silva Carvalho, Carlos

Reitz, Elizabeth (University of Georgia)

[234]

Discussant

Rempel, Sidney [52] see Bryce, William

Ren, Kara (University of British Columbia), Kendra Leishman (University of British Columbia), Aleksa Alaica (University of British Columbia) and Luis Manuel Gonzalez-La Rosa (University of British Columbia)

[268]

Returning Home: Zooarchaeological and Bioarchaeological Insights on Nasca Domestic Foodways and Local Mortuary Traditions at Cocahuischo, Peru

Excavations between 2010 and 2012 at the Nasca site of Cocahuischo (300–700 CE) recorded domestic and mortuary activities of a large local community composed of 130 house structures, patio preparation spaces, and dozens of cist tombs. Employing zooarchaeological and bioarchaeological techniques to the human, vertebrate and invertebrate remains from Cocahuischo, we explore interhouse variability in acquisition, processing, and sharing of animal remains as well as the demographic and health profiles of human tomb burials. Our analyses reveal that the raising and consumption of guinea pigs was a central part of foodways, which was supplemented by camelid meat and coastal invertebrates. Higher proportions of camelid remains and greater intensities of burning on fauna recovered from a possible workshop highlights divergent provisioning strategies for laborers. Human burials from stone cist tombs at Cocahuischo include individuals from a range of demographic profiles, with non-metric traits indicating several instances of direct kinship ties. The results from our analyses attest that local communities at the end of the Early Intermediate period (~600 CE) were managing their networks in response to changing sociopolitical dynamics, mainly the emergence and increasing influence of the Wari in the Nasca region.

Ren, Kara [215] see Leishman, Kendra

Renaud, Jared

[111]

Chair

Renaud, Jared and Rebecca Harkness (University of Arizona)

[111]

On the Shoulders of Giants: A History of Archaeological Research in the Mogollon

Since its inception by Emil Haury during the height of the cultural-historical period of American archaeology, the idea of a Mogollon cultural tradition has exhibited considerable dynamism through time. The concept has since developed as a means to delineate a mountain highlands–based cultural tradition from that of the identified Hohokam and Ancestral Pueblo culture areas of the early twentieth century into an effective vehicle to highlight regional adaptations, trade and exchange networks, and various frontier transitions in the precontact Indigenous Southwest. In this paper, we provide a brief historical synthesis of archaeological research in the Mogollon area while arguing for an inherent dynamism in research there compared to adjacent cultural regions in the US Southwest. We then explore how external geopolitical and historical factors have shaped perception and possibilities in Mogollon archaeology to the present day.

Renson, Virginie (University of Missouri)

[121]

Discussant

[24]

Chair

Renson, Virginie (University of Missouri), Maria Verde (University of Naples), Alberto De Bonis (University of Naples), Wesley Stoner (University of Missouri) and Hector Neff (University of California, Long Beach)

[121]

Using Isotopic Geochemistry to Relate Ceramics to Raw Materials

The provenance of ceramics assessed through chemistry is most commonly approached through a comparison of ceramics with other ceramics of known origin. More rarely are chemical analyses employed to relate objects to their geological context. This problem derives from the inherent limitations of elemental analysis and is commonly found in studies that employ a single- rather than multiproxy approach. Among available proxies, isotopic geochemistry offers the advantage of preserving the signatures of different raw materials used to produce ceramics. Here, we present studies involving the isotopic analysis of ceramics and raw materials from multiple contexts in Mesoamerica and the Mediterranean region. These studies demonstrate the strength of the approach for associating ceramics to their raw material, how new insights are gained by identifying the geological context, and the importance of integrating the isotopic approach with methods of elemental chemistry and mineralogy.

Renson, Virginie [69] see Buckley, Gina

Renson, Virginie [24] see Alvey, Jeffrey

Renson, Virginie [121] see Czujko, Stephen

Renson, Virginie [50] see Dussubieux, Laure

Renson, Virginie [121] see Haecker, Charles

Renson, Virginie [121] see Johns, Sherman

Renson, Virginie [188] see Rankle, Chad

Restall, Matthew (Penn State University) and Amara Solari (Penn State University)

[21]

The Creation, Racialization, and Perpetuation of Aztec and Maya Human Sacrifice Mythology (with a Case Study from Yucatán)

In the sixteenth century, European settler-colonists in the Americas developed tropes of barbarity that they applied to Indigenous American populations. Primary among these tropes were allegations of “human sacrifice” performed for millennia in the precontact past and the colonial present. In this paper, an art historian and a historian, both scholars of colonial Mesoamerica, argue for the agentic construction of these rhetorical devices. Using the sixteenth-century Catholic mural cycles of Saint Michael the Archangel at Mani as a case study, they examine changes in iconography and pigment selection in the first decades of the Franciscan evangelical campaign. These seemingly mere aesthetic choices will trace and reveal the unintended

consequences of the racialized biases with which Europeans created the concept of “human sacrifice”; as a result, paradoxically, a Marian-centric form of Catholicism developed in Yucatán. This case study is but one example of how colonial processes and neocolonial misunderstandings—not actual precontact practices—led to the construction of Mesoamerica’s “human sacrifice” culture.

Reuther, Joshua [174] see McCaig, Haley

Reuther, Joshua [168] see Smith, Gerad

Reyes, Omar (CEHA, Instituto de la Patagonia, UMAG), Manuel San Roman (CEHA, Instituto de la Patagonia), Carolina Belmar (Universidad de Chile), Augusto Tessone (Instituto de Geocronología y Geología Isotópica) and Ximena Urbina (Pontificia Universidad Católica de Valparaíso)

[77]

La ocupación de los grupos canoeros y europeos criollos en tiempos coloniales y republicanos en torno a la barrera biogeográfica de península de Taitao/golfo de Penas (~46°-48°S), Patagonia occidental, Chile

Las prospecciones arqueológicas realizadas en las áreas costeras insulares y continentales en torno a la extensa barrera biogeográfica conformada por península de Taitao y golfo de Penas (~46°-48°S) en el borde Pacífico nos revelan una importante evidencia de registros materiales de tiempos coloniales y republicanos. Estas son producto de actividades originadas tanto por grupos canoeros (cazadores-recolectores-pescadores marinos) como por europeos/criollos, en momentos en que se desarticulan y transforman los modos de vida de los primeros luego del contacto europeo. Esta área comienza a ser visitada y ocupada bajo nuevos términos geopolíticos, económicos extractivistas y estratégicos, reconfigurando aquel espacio. Es así como, a través del registro material, discutimos variables como intensidad de ocupaciones, diversidad de sitios, subsistencia, dieta y cronologías de ocupación en relación al uso del borde costero durante tiempos históricos, permitiendo entender así las características de la ocupación humana en este espacio archipelágico. En una escala más amplia, discutimos la evidencia arqueológica para entender cómo opero esta barrera biogeográfica en el archipiélago patagónico y su rol en la circulación, movilidad marítima y contacto de las poblaciones canoeras y, posteriormente de los grupos europeos/criollos. Agradecimientos: Esta investigación ha sido financiada por los Proyectos ANID-FONDECYT 1210045 and ANID-Regional R20F0002.

Reyes, Omar [77] see Moreno-Meynard, Paulo

Reynard, Jerome (University of the Witwatersrand)

[225]

Can Archaeofaunal Data Track Site-Specific Occupational Intensity? Case Studies from the Late Pleistocene in the Southern Cape of South Africa

The ubiquity of archaeofaunal remains and discarded bone at Paleolithic sites make these useful datasets for investigating a range of site formation processes, including anthropogenic site-use activity. Occupational intensity is a common theme in current research and is often linked to demographic changes in the past. Given its association with early evidence of human behavioral complexity, the Late Pleistocene in the southern Cape of South Africa may be important in interrogating links between socio-demographic changes and site-specific occupational intensity. In this paper, zooarchaeological and taphonomic data are evaluated as proxies for occupational intensity in the southern Cape. Geoarchaeological and micromorphological data from three Middle Stone Age sites—Klipdrift Shelter, Blombos Cave and Pinnacle Point—are used to ascertain whether specific layers have increased or decreased periods of occupational intensity at each site. Various zooarchaeological and taphonomic data are then compared to this reference data to assess the value of faunal proxies in tracking temporal changes in occupations. The results show that anthropogenic bone surface modifications appear to be effective in tracking occupational patterns, with trampling a particularly useful indicator. The implications and limitations of these proxies are discussed, particularly with regard to settlement patterns in the southern Cape.

Reynolds, Austin [34] see Smith, Rick

Reynolds, Cerisa (Aims Community College)

[2]

Building a Deeper Understanding of the Archaeology of Food through Photographs and Critical Reflection

The archaeology of food is rarely revelatory of an individual's diet or of individual meals. Instead, it is usually indicative of a community's procurement and processing patterns, consumption patterns, cooking methods, and disposal practices. But how can we teach students to understand this distinction and to look for and investigate these larger patterns in their own lives and in the archaeological record? In this session, I'll suggest that photo documentation of and guided reflection on a meal they eat can encourage our students to start thinking more deeply about the archaeology of food and all it can (and cannot) reveal. By reflecting on what they ate and why they ate it, where the various ingredients came from, the labor put into the meal, what is left behind for future archaeologists, and where those various components end up, students can think critically about both their individual role in our food system and their connection to larger cultural systems. This single exercise beautifully reveals the complexity of our students' lives and enables them to better seek out evidence for complexity in the lives and societies of past peoples, ever impacted by identity, environment, infrastructure, and economics.

Reynolds, Sally, Matthew Bennett (Bournemouth University), Kathleen Springer (USGS), Jeff Pagati (USGS) and Davis Bustos (NPS)

[35]

Stepping toward a Paradigm Shift: The White Sands Footprints

Prehistoric footprints indicate presence, behavior, and the interactions between different animal species. The discovery of footprints at White Sands National Park in New Mexico has shown how tracks can transform our understanding of American prehistory and crucially the history of its first indigenous inhabitants. In September 2021 we announced footprints on a former lakebed (playa) dated by seed layers to the Last Glacial Maximum some 21,000–23,000 years ago, which have been confirmed via other dating methods. This presentation discusses the implications of the evidence of the footprints at White Sand, reveal what they can say about the peopling of the Americas more generally, and show how American archaeology is on the cusp of a paradigm shift in which footprints traces will transform our knowledge of the first Americans over the coming decade.

Rhode, David (Desert Research Institute)

[202]

Dietary Inferences based on Starch Residues from O'Malley Shelter, Southern Great Basin

This poster presents a history of prehistoric plant use based on starches recovered from plant processing tools at O'Malley Shelter, Lincoln County, Nevada. O'Malley Shelter (26LN418) is an important archaeological site in the Clover Mountains near the Great Basin's southern margin, with an 8,000-year-long record of occupation. Extraction and analysis of starch residues from an extensive sample of milling stone, ceramic, and basketry artifacts provides a record of the use of starch-bearing plants through the past several millennia, including pinyon pine, acorns, geophytes, native grasses, maize, and other important plant foods. The dietary plant food history from O'Malley Shelter is considered in relation to other prehistoric dietary trends in the Great Basin region.

Rhodes, Stephen [294] see Abu Jayyab, Khaled

Ribeiro, Artur (University of Kiel)

[298]

Painting Pictures: There Is Madness in Archaeological Methods

One of the critiques *The Dawn of Everything* was subject to was that it failed to provide a clear method or had

no method at all and that it was unscientific. There is some truth to these critiques since *The Dawn of Everything* does have its problems. However, underlying these critiques is a more pervasive problem, that of over-trusting the role of scientific methods and techniques, quantitative approaches, and technological means to understand the past. Despite the rhetoric, many of these so-called scientific approaches are anything but scientific in the strict sense of the word. They are just fast science, and as Byung-Chul Han has recognized, a purely hectic rush produces nothing new. It only reproduces and accelerates what is already available. More than providing strict scientific evidence or following stringent methodological rules, *The Dawn of Everything* does do something very well, something that most “science” in archaeology fails to do, and that is provide a picture of life in the past. People will never understand what it was like to live in the past through overly complex graphs or distribution maps, but they can through loose connections, multiple examples, and descriptions of past practices and lifeways.

Ribera Torró, Esteve [185] see Toyne, Jennifer Marla

Ribera Torró, Josep [185] see Toyne, Jennifer Marla

Riccio, Jordan (TRC) and Erin Steinwachs (TRC)
[269]

Life on the River: Recent Investigations in the Lower Susquehanna River Valley

This poster will present the field methods, analyses, and results of recent Phase II archaeological investigations of a precontact period site located on Sicily Island (36LA69) within the Pennsylvania side of the Lower Susquehanna River. A discussion of research themes—including lithic sourcing and technology, chronology, settlement patterns, and subsistence—temporally diagnostic artifacts, and interpretations of overall site function will be presented. The poster will highlight the research value of the site and its contribution to our understanding of the prehistory of the Lower Susquehanna River Valley.

Rice, Glen [88] see Loendorf, Chris

Rich, Megan, Charles Beightol (National Park Service, Vicksburg National Military), Christy Visaggi (Georgia State University), Justin Tweet (National Park Service) and Vincent Santucci (National Park Service)
[329]

Historic and Recent Investigations of the Geology and Paleontology of Vicksburg National Military Park

Vicksburg National Military Park (VICK) was established in 1899 to commemorate the 47-day siege of Vicksburg, which ended in a Confederate surrender on July 4, 1863. VICK’s significant history extends even further than the Civil War as the park contains evidence of life from the fossil record. While the oldest exposed geologic formations in VICK belong to the eponymously named Oligocene-age Vicksburg Group, gravels sourced from older Paleozoic rocks upstream in the Mississippi River system can also be found below the topmost Quaternary sediments (mostly comprised of Pleistocene loess that characterizes the park’s bluffs). Multiple intersections exist between the geology and paleontology at VICK and the archaeological record. Jasper effigy beads from the Middle Archaic period represent the earliest known human interactions with the local geology. Later, effigy pipes from regional Mississippian sites have been linked to a Vicksburg Group formation exposed in the park due to fossils identified in the material. Famous historical scientists including Charles Lesueur, Charles Lyell, and John Wesley Powell also studied the geology and paleontology of Vicksburg. In 2022, a field inventory of VICK’s fossils was conducted, and the findings, as well as historical narrative interwoven with these resources, were summarized in a comprehensive report.

Richard, Francois (University of Chicago)**[250]***Ann Stahl's Archival Imagination*

In *Making History in Banda*, Ann Stahl stages an encounter with Rolph Trouillot's *Silencing the Past* to develop an inspiring discussion of sources, interdisciplinary thinking, the supplemental use of archives, and the fraught dynamics of historical production in the crafting of visions of Africa's past. Providing a robust support for her work in Banda, Stahl's attentiveness to matters of historical epistemology is one of the book's major contributions, and, I would argue, one of her most powerful scholarly legacies, which has guided the work of so many of us on the materiality of Africa's recent (and less recent) pasts. This paper revisits Stahl's thoughtful epistemology of history, by placing it in conversation with the archival/historical turn that informed its development and more recent trends in "archive theory."

Richards, Emma (Beloit College), Willa Richards (University of Wisconsin, Milwaukee) and Simone Bruhy (University of Wisconsin, Milwaukee)**[330]***From Barbies to Bones: Celebrating Dr. Patricia B. Richards's Legacy*

As the daughters of archaeologists, we've lived on, worked at, and visited scores of archaeological sites across the Midwest. Cumulatively, we've been witness to nearly every decade of Patricia B. Richards's career. Our mother's revolutionary ability to seamlessly merge her roles of mother and archaeologist gave her daughters an extraordinary gift: not only did she let us into her professional world, she made us feel deeply at home there. We slept on cots in her office, her students and colleagues became our friends, we did homework in her lab or in the front row of her classes, we did data entry, we did fieldwork, we cleaned and sorted, we edited. In doing so she deeply influenced our personal and professional identities. In honor of our mother's retirement, we share our favorite memories of our time spent with her in the field and the lab. This paper not only celebrates her impact on the field of archaeology but serves as a reminder of the strength found in being a woman, a mother, and a mentor.

Richards, Julian (University of York Archaeology Data Service)**[63]***Discussant***Richards, Katie (New Mexico State University)****[284]***Painted Pottery on the Fremont Frontier*

Frontiers are dynamic regions of integration and exclusion where identity and culture are negotiated. The relationships between the heartlands of the North American Southwest and many of its resulting frontiers have been explored; however, it is still not clear how interaction between Fremont peoples and those in the greater Southwest influenced identity and culture on this northern frontier. This poster uses painted pottery production, distribution, and use to explore Fremont within their broader regional context. The results of this analysis suggest Fremont painted designs are closely related to the design horizons produced in the Four Corners region during the AD 900s and early 1000s. These designs were adapted to create a distinctive Fremont design style that remained relatively static for nearly 300 years and is found in similar archaeological contexts across the region. When these results are situated within the social, demographic, and historical context of the greater Southwest, they suggest that during the Late Fremont period, the region became a dynamic frontier of the northern Southwest where people maintained a shared social identity and used painted pottery to signal both a heritage in and separation from their southern neighbors.

Richards, Michael [201] see Edwards, Nicolette

Richards, Michael [236] see Tarrant, Damon

Richards, Nicholas (SSP Innovations)**[330]***Dr. Patricia Richards and the MCPFC Story: Narrative History and Historiography*

This paper illustrates how Milwaukee County institutions' relationships with commercial, social, and religious enterprises, particularly those involving the Milwaukee County Poor Farm Cemeteries (MCPFC), were reflected in contemporary written accounts. Further, it examines how archaeological investigations have changed and challenged these accounts. Archaeological and historical data are used to identify specific instances where the Milwaukee County institutions were involved with private business concerns. Exploring public perceptions of the MCPFC over time in press, popular, and specialist accounts will demonstrate that the archaeology conducted and directed by Patricia Richards is vital to an honest and still-awaited public reckoning with this part of our history.

Richards, Virginia [154] see Wood, Peter

Richards, Willa [330] see Richards, Emma

Richardson, James [172] see Burnett, Jeff

Richardson, Sarah (University of Manitoba), Timothy Matney (University of Akron), Britt Hartenberger (Western Michigan University), Mary Shepperson (University of Liverpool) and Tina Greenfield (University of Winnipeg)**[169]***The Sebittu Project: A Report on the 2023 Pilot Season*

The preliminary season of the Sebittu Project on the Erbil Plain of Iraqi Kurdistan was conducted over four weeks this summer. The project includes seven Neo-Assyrian sites on the plain with the goal of documenting the agrarian economy during the Neo-Assyrian period (ca. 900–600 BC) in northern Iraq, the heartland of the Assyrian empire. The initial identification of the sites was part of the larger Erbil Plain Archaeological Survey (EPAS) headed by Jason Ur when documenting over 900 sites via pedestrian survey over several field seasons. This survey data led to the choice of seven clustered sites not only due to their proximity to one another but also the high percentages of clear Neo-Assyrian ceramic material. These seven sites include ancient villages, hamlets, and farmsteads located in the Erbil Directorate of the modern Kurdish Autonomous Region (KRI). The 2023 preliminary season included both pedestrian and geophysical survey, at two sites, as well as a test excavation trench. This work was done to explore the feasibility of working at small, flat sites within agricultural zones in the region. The results from this season, as well as implications for further fieldwork and research will be discussed here.

Richards-Rissetto, Heather (University of Nebraska, Lincoln)**[74]***Discussant***Richards-Rissetto, Heather (University of Nebraska, Lincoln), Ethan Jensen (University of Nebraska, Lincoln), Allison Bain (Université Laval) and Sophia Perdikaris (University of Nebraska, Lincoln)****[148]***Fostering Preservation and Public Engagement of a Colonial-Era Site on Barbuda with Photogrammetry*

The threats to cultural heritage on the Caribbean island of Barbuda are multifaceted, stemming from natural disasters, rising sea levels, political and economic policies, and infrastructure development. While such threats are not new, their increasing and combined detrimental impacts are leading to the exponential damage and

destruction of cultural heritage. Highland House, a colonial complex spanning the eighteenth to early nineteenth centuries, situated on Barbuda's highest point, is exposed to harsh environmental conditions and dramatic climate events. While climate change, resulting in more dramatic and frequent climate events such as hurricanes, is increasing deterioration rates of the structures at Highland House, changing social, political, and economic practices also threaten the site. This paper explores the potential of employing aerial (drone) and ground-based photogrammetry to collect 3D geospatial data for documentation, preservation, and dissemination efforts of Highland House. The Barbuda Council, a local authority, collaborates on the project to foster cultural heritage preservation through tourism efforts. 3D models were generated from combined aerial and ground-based photogrammetry of the site's extant structures for multipurpose use including historical reconstructions and web-based models accessible on and offsite to promote broader public awareness of the site and encourage the public to visit Highland House.

Richards-Rissetto, Heather [148] see Jensen, Ethan

Richter, Kim (Getty Research Institute) and Irad Flores García (Universidad Veracruzana) [216]

El Juego de Pelota en la Huasteca y las redes internacionales del Golfo

No es una revelación nueva que exista evidencia arqueológica para el Juego de Pelota en la Huasteca, una región que forma el límite septentrional de Mesoamérica y de la costa del Golfo. Se han documentado canchas de pelota en sitios arqueológicos y figurillas de barro que llevan indumentaria protectora de jugadores, como rodilleras o yugos. De las figurillas sabemos que tanto hombres como mujeres fueron jugadores, un aspecto cultural destacante porque fue un papel típicamente asociado con hombres en Mesoamérica. Desafortunadamente se sabe poco más sobre el significado y el ritual del Juego de la Pelota en la Huasteca por falta de excavaciones sistemáticas en la región. Además, no se han encontrado representaciones narrativas sobre rituales asociados con el Juego de Pelota como en El Tajín, Las Higueras, Chichen Itza y otros sitios. Esta ponencia se enfoca en ejemplos de Juegos de Pelota en el sur de la Huasteca para argumentar que sitios con canchas formaron parte de la red de intercambio ideológico del periodo clásico y mantenían relaciones a lo largo del Golfo con ciudades como El Tajín o Santa Luisa.

Richter, Kim [248] see Gutiérrez, Gerardo

Richter, Kristine (Harvard University), Ryan Kennedy (Indiana University, Bloomington) and Jess Miller-Camp (Indiana University, Bloomington) [89]

Tails from the Animal Storerooms: Case Studies on the Uses and Limitations of Natural History Collections Using Multiproxy Approaches

Natural history collections (including zooarchaeological collections) provide essential information for archaeologists. They are primarily used in identifying bones and other hard tissues, and they provide references for biomolecular and isotopic studies. Biomolecular data from these collections are increasingly the subject of historical ecological research or used to build reference libraries of molecular data. However, natural history collections are never free of issues and often have problematic taphonomic histories, especially in expansive and/or multigenerational repositories. In this paper, we present a conversation between a zooarchaeologist and molecular biologist about two case studies highlighting ways to tackle the uses and limitations of natural history collections through multiproxy approaches. First, we consider zooarchaeology by mass spectrometry (ZooMS) analyses of modern and archaeological rabbit specimens. This project became unexpectedly complex due to decades-old misidentifications of comparative rabbit specimens used to generate baseline ZooMS data; ultimately, we found creative ways to update the taxonomic identifications of these (mostly) rabbits. Second, we consider identifying research value in "oddball" specimens collected over decades from zoos and animal breeders; these specimens, including zebras and lovebirds, can contribute to comparative studies and used as sources of genetic and molecular data not typically found in North American zooarchaeological collections.

Richter, Kristine [145] see Bishop, Jack
 Richter, Kristine [268] see Faber, Sarah
 Richter, Kristine [199] see Ho, Joyce Wing In
 Richter, Kristine [199] see Ho, Percy Hei Chun
 Richter, Kristine [259] see Jiménez Cano, Nayeli

Rick, John (Stanford University)

[27]

Discussant

[27]

Chair

Rick, John (Stanford University), Erick Acero-Shapiama (Programa de Investigación Arqueológica y Conservación Chavín de Huántar) and Rosa Rick (Programa de Investigación Arqueológica y Conservación Chavín de Huántar)

[27]

Gallery of the Condor: The Earlier End of Chavín's Underground Structures

In 2019 a new gallery was detected by the Programa de Investigación Arqueológico y Conservación en Chavín de Huántar in Chavín's Building D, which was explored in 2022 and excavated in 2023. Named for a sculptural stone vessel depicting a condor left during gallery closure, the compact gallery differs notably from others in its planning and construction, and unusually was intentionally closed well before the end of the Chavín era. The gallery originated as a small surface structure that became a gallery as Building D grew horizontally and vertically, engulfing a space not initially intended for subterranean use. Access to the structure was maintained by the later addition of an entrance corridor and long ventilation duct, costly measures to retain the use of a very small, if already ancient chamber. Excavations reveal gallery use across an extended time, with earliest layers lacking ceramics, correlating with unusual features of early construction including banquettes and corbelled ceilings. Overall, the contents and features of the gallery suggest an early stage of gallery conceptualization, construction, and usage ancestral to both the standardization of the numerous later phase Chavín galleries and the apparent need to access past ritual spaces.

Rick, John [27] see Acero-Shapiama, Erick

Rick, John [27] see Contreras, Daniel

Rick, John [27] see Lema, Veronica

Rick, Rosa

[27]

Chair

Rick, Rosa [27] see Acero-Shapiama, Erick

Rick, Rosa [27] see Rick, John

Rick, Torben (Smithsonian Institution), Natasha Vokhshoori (St. Lawrence University), Todd Braje (University of Oregon), Christine France (Smithsonian Institution) and Matthew McCarthy (University of California, Santa Cruz)

[304]

Late Holocene Nearshore Marine Productivity, Climate Change, and Changing Sociopolitical Dynamics on California's Northern Channel Islands

Understanding the social, political, and economic dynamics of coastal hunter-gatherer-fishers was a hallmark of Jeanne Arnold's multi-decade archaeological research. Arnold integrated marine climate records and archaeological data to develop hypotheses about the evolution of political hierarchy, exchange systems, and

territoriality on California's northern Channel Islands (NCI). This research was highly influential and spurred a series of lively debates that continue today. While marine climate records for the Santa Barbara Basin (SBB) are among the best in the world, with 25–50-year sequences for the Holocene, these records are averages for the SBB as a whole. This leaves key questions about local marine conditions near specific sites and villages, especially since marine climate and productivity (e.g., temperature and upwelling) are known to vary considerably across the NCI. Here we build on decades of NCI research by presenting compound specific and bulk stable isotope data from archaeological California mussel shells from across the Late Holocene NCI, including some of the sites excavated by Arnold. We also describe the curation of Santa Cruz Island archaeological collections at the Smithsonian Institution. These data illustrate the value of legacy collections for evaluating long-standing archaeological research questions and understanding climate change.

Ridge, William (University of Illinois, Chicago), Danielle Riebe (University of North Georgia), Attila Gyucha (University of Georgia) and William Parkinson (The Field Museum)

[116]

With a Little Help from My Friends: New Radiocarbon Dates from the Great Hungarian Plain

The expanded availability and use of radiocarbon dating by archaeologists has significantly reshaped the understanding of long-standing prehistoric narratives. These advances have also challenged the cultural-historic notion of archaeological cultures that have dominated research for over a century. In this paper, we examine recently collected radiocarbon dates from multiple projects working in the Körös River Basin in eastern Hungary. These dates span the Neolithic and Copper Age (ca. 6000–2600 BC) and complicate the previously neat and orderly picture of prehistoric sociocultural trajectories. In particular, we look at four aspects that have been challenged based on the radiocarbon dates. (1) The process of tell abandonment and the dispersal of large settlements at the end of the Neolithic. (2) The chronological and sociocultural relationship between Late Neolithic and Early Copper Age cultures units. (3) The absolute chronology of the Tiszapolgár and Bodrogkeresztúr cultures in the Early Copper Age. (4) The apparent gap in radiocarbon dates shortly after 4000 BC as it relates to demographic processes. We conclude by placing the Körös Region into the broader context of the Great Hungarian Plain and southeastern Europe to explore regional variation in cultural trajectories throughout the fifth and fourth millennia.

Ridge, William [86] see Reid, David

Ridky, Jaroslav [96] see Kvetina, Petr

Riebe, Danielle (University of Georgia), Attila Gyucha (University of Georgia) and Balázs Nagy (Eötvös Loránd University)

[130]

A River Runs through It: Tales of River Management Practices on the Great Hungarian Plain

People are intricately connected to the land around them, and throughout time, people have manipulated their surroundings to better fit their immediate social, cultural, economic, or subsistence needs with little to no thought about long-term environmental consequences. The Great Hungarian Plain is no exception, and during different periods in the past, people have significantly altered the landscape with varying outcomes. Through three case studies, one historic (eighteenth–nineteenth centuries) and two Late Neolithic (5000–4500 BC), this paper will compare how people on the Great Hungarian Plain interacted with and transformed the braided river channels that traversed the landscape. These transformations reflect peoples' knowledge and understanding of sustainable water management and the impacts of human-induced landscape changes.

Riebe, Danielle [116] see Ridge, William

Riebe, Danielle [141] see Seifert, Jerrod

Riel-Salvatore, Julien (Université de Montréal)**[126]***Discussant***Riel-Salvatore, Julien (Université de Montréal), Claudine Gravel-Miguel (New Mexico Consortium; Université de Montréal), Vitale Sparacello (Università degli studi di Cagliari) and Fabio Negrino (Università degli studi di Genova)****[246]***Rythm of Youth: Childhood in Late Pleistocene and Early Holocene Liguria*

This paper presents a synthesis of recent research that illuminates the reality of forager childhoods at several sites dated to the terminal Pleistocene and early Holocene in the region of Liguria (NW Italy). Indeed, recently published data from the sites of Arma di Nasino, Arma Veirana, Caverna delle Arene Candide, and Grotta della Bàsura not only underscore the role and place of children in prehistoric societies at the time, they also reveal how children may have contributed to creating the archaeological record, with concomitant implications for its interpretation. Furthermore, life history and funerary data from several individuals from these sites also permit a discussion of how the last hunter-gatherers of the region partly organized their lifeways around the reality of caring for and moving children across this rugged landscape. This shows that far from being afterthoughts in these groups' organization, children were central considerations in as well as active agents in it.

Riera Andreu, Carla [158] see Aldana Mendoza, Jesús Alberto

Rieth, Christina (New York State Museum)**[311]***The Archaeology of the Jennings Site, Saratoga County, New York***[WITHDRAWN]**

Riggs, Erin [166] see Goulding, Ella

Riley, Erin [80] see Langlois, Meghan

Riley, Tim (Prehistoric Museum @ USU Eastern)**[97]***Moderator***Riley, Tim (Prehistoric Museum @ USU Eastern)****[138]***Perishable Weaponry from the Northern Colorado Plateau: Adding Temporal Context to Wayward Collections*

Archaeological sites in the high dry deserts of eastern Utah have yielded remarkably preserved collections of perishable technological components of past lifeways. This includes many examples of projectile weaponry. These objects can add direct evidence to studies focused on the adoption of the bow and the persistence of the atlatl in specific regions, an argument frequently based on changes in projectile point technology. Unfortunately, many of these sites with incredible organic preservation were heavily impacted by looting and other poorly documented collection practices in the twentieth century. These wayward practices have led to a loss of context and cultural affiliation for these rare objects. This presentation focuses on adding temporal context to perishable projectile weaponry housed at the Utah State University Eastern Prehistoric Museum through direct radiocarbon dating. Because many of these objects have very limited spatial association due to their removal from archaeological sites by private collectors, temporal context is one of the only ways to better associate these objects with the people and archaeological cultures who created and used them in their daily lives.

Rincon Jaramillo, Ana (Universidad de Caldas) and Juliana Gomez Mejia (Universidad de Caldas)

[188]

Cremation during the Early period (1000 BC–AD 600) in the Archaeological Site Matecaña (Pereira)

Four funerary urns from the archaeological site Matecaña (Pereira, Risaralda, Colombia) were analyzed to understand the cremation mortuary practice during the Early period (1000 BC–AD 600). This archaeological record does not count with direct descendants and is under the stewardship of the Universidad de Caldas, which follows adequate processes to allow a good conservation and protection of the human remains that are treated with respect and dignity. The cremains went through an anatomical classification that led to establishing the Minimal Number of Individuals with the Landmark System, as well as a reconstruction of their biological profile and an interpretation of the macroscopic changes made by heat exposure, such as colorimetry, the degree of cremation, presence of heat-induced changes, and the temperature that the incineration reached. The results showed that the funerary cycle had three processes divided into 11 stages. During the first moment, the biological death of the individual leads to rituals and a temporary deposition. After this, the second process is where the cremation is carried out, following the skeletonization of the corpse. The combustion of at least 28 individuals of different ages (fetal, infants, and adults) was intense (400°C→ 600°C) and finalized with their burial in funerary urns from a typology of the Early period.

Rincon Mautner, Carlos (Paleo-environmental and Historical Research Inc.)

[221]

Dating the Petroglyph Cave of the Purrón Dam Complex of the Tehuacan Valley, Mexico

Rectilinear planes cut into one of the gypsum outcrops near the base of the north face of Cerro Mequitongo, the hillock that rises above the south end of the massive Purrón Dam, created a subterranean space. The labor invested in excavating this man-made cave (Tc-511), its walls plastered with a thin veneer of stucco and decorated with petroglyphs belonging to different time periods, suggest it had a religious/ceremonial purpose. Petroglyphs allude to hunting, the ballgame and animals active during the rainy season. A charcoal sample obtained from a stucco spall yielded an age of 400–200 BCE, coeval with the age of a hearth on the alluvium that accumulated behind the Stage 1 construction of the Purrón Dam. It is hypothesized that this man-made cave served to organize the people in building and maintaining the dam during its initial construction and working on other soil conservation and water management projects located within the Lencho Diego Canyon. The dates, petroglyphs, and the ceramic types recovered allow for a secure dating of the cave and Stage 2 of the dam to the Middle and Late Santa María Phases. Both features continued to be used in the subsequent Early and Middle Venta Salada Phases.

Rinehart Macrae, Grace (University College Dublin)

[233]

Rennes-le-Château, History and Myth in Competition

In a small French village, discussions of medieval heretics and history have become combined by modern tourists. Popular literature has only added to the issue. Since the publication of pieces like *Holy Blood, Holy Grail* and *The Da Vinci Code*, the line between fact and fiction has grown thin. In 1965, excavations in Rennes-le-Château, the village which produced the original legend from which these fictions draw their fact, were banned. This stemmed from the multitude of treasure hunters who believed there were great stores of gold or the Holy Grail to be discovered. Some of the most extreme acts of destruction involved breaking a church altar and disrupting graves. In the 1990s, a tourism initiative was launched to promote the Aude region as “Cathar Country.” Now modern-day visitors come for the legends and romanticized versions of the Cathars and the Holy Grail, mixing myths and the history of a brutal genocide with esoteric assumptions, making it nearly impossible to tell fact from fiction. I seek to discuss the difficulty in presenting history to an audience to compete with myth, and the challenge in deciphering a history riddled with fiction and conspiracy when traditional archaeology is banned.

Ringle, William (Davidson College [Emeritus]), Melissa Galvan (Tulane University), Ken Seligson (California State University) and Gabriel Tun Ayora (Unaffiliated)
[261]

Green Acres: The Valle de Yaxhom and Puuc Prehistory

It has long been recognized that the two principal physiographic subdivisions of the Puuc are the wedge-shaped Valle de Sta. Elena, just south of the Puuc escarpment, and to its south, the Bolonchen Hill District. One goal of the PARB project was to explore the eastern manifestations of these two regions for possible differences in civic and residential organization. This contribution examines the development of social complexity in the eastern tip of the Valle de Sta. Elena, a shallow basin known as the Valle de Yaxhom, today renowned for its fertile soils. Ground and lidar survey by the PARB project indicate that it, too, was the major concentration of population in our regional sample, beginning with the construction of impressive Middle Formative monumental acropolises and peaking during the Terminal Classic period. This overview examines patterns of civic architecture within our sample, as well as the relationship of settlement to landforms and soils. We examine the question of whether the Valle was in fact a single community, and whether it exerted influence over neighboring communities to the south, as reflected in their civic architecture. Finally, we consider the broader economic and political position of the Valle within the region.

Ringle, William (Davidson College [Emeritus])
[292]

Discussant

Ringle, William [261] see Hill, Rebecca

Ringle, William [261] see May, Rossana

Ringstaff, Christopher (Texas Department of Transportation)
[9]

The Buttermilk Creek Ranch Sites 41BL1431 and 41WMI498: Examining Land Use at Two Prehistoric Lithic Resource Areas in Bell and Williamson Counties, Texas

The Buttermilk Creek Ranch (BCR) is located within the upper Buttermilk Creek Valley in Bell and Williamson Counties, Texas. Across this landscape, valley incision dissects chert-bearing limestones of the Lower Cretaceous Edwards Group exposing extensive outcrops of tool quality stone. In direct proximity to BCR, are the well-known multicomponent sites Gault (41BL323) and Debra L. Friedkin (41BL1239). Recent archaeological survey at BCR identified two large lithic procurement sites, 41BL1431 and 41WMI498. The density of chipped stone artifacts and workshop features recorded at these sites is considerable and indicates intensive raw material acquisition occurred. As part of the survey, chert sampling across BCR has allowed for the development of a lithostratigraphic model of the Upper Buttermilk Creek Valley. This presentation provides a summary of the survey results, site delineation, Global Navigation Satellite System (GNSS) methodology, and spatial patterns in chert variability. An initial interpretation of the data is presented detailing high density debitage areas and discrete loci that reveal preferences in raw material selection relative to elevation. Particular attention is given to identifying debris loci with Paleoindian technological signatures to better understand lithic raw material procurement at BCR in relation to Paleoindian camps and workshops at nearby Gault and Friedkin.

Rios Allier, Jorge (Indiana University)
[267]

Institutional Analysis of the Social Property System and Its Application for the Management of Cultural Resources in Mexico

In Mexico, archaeological sites are located on private, communal, ejido, federal, or vacant land. The exercise of land ownership rights determines the type of technical and legal protection, which is usually assumed by the Mexican State. Generally, to mitigate risks, official archaeologists must carefully collaborate with public, private, or common-pool resources and develop strategies to promote site management. This paper presents an institutional analysis of the different approaches in which social land property boards—those formed by

members of an agrarian nucleus or people with communal property or interests in a community—can contribute to the conservation of archaeological resources and their operational potential for the Mexican case. Based on recent fieldwork experiences at a collectively owned site in southeastern Mexico, I discuss the unique challenges of involving a community in the exercise of its land ownership rights in parallel to archaeological conservation, and the potential of such participation to encourage local community archaeological stewardship.

Riris, Philip [127] see Pearsall, Deborah

Rissolo, Dominique (University of California, San Diego), Holley Moyes (University of California, Merced), Justin Simkins (Emesent), Kay Vilchis Zapata (Kay Vilchis Photography) and Graham Goodwin (University of California, Merced)

[321]

Multimodal Digital Documentation of Actun Tunichil Muknal, Belize

Actun Tunichil Muknal (ATM), located in western Belize, is among the most touristed archaeological caves in the Maya area and is well known for its striking physical characteristics and intact cultural deposits. Though well surveyed and studied, the cave and its many fragile and at-risk offerings had not been digitally documented. A collaborative program of scanning was conducted in summer 2023 using complementary imaging modalities across scales and resolutions. These included SLAM-based mobile lidar—which was ideally suited to the complex, partially flooded passageways and high, narrow chambers of the cave—as well as structured-light scanning (of individual objects or features) and photogrammetry. Particular attention was given to the human skeletal remains and ceramic vessels that lie within close proximity to visitor routes within the cave. The result of this integrative approach will be a fused multi-resolution digital twin of ATM that will not only serve as an accurate geometric record of the cave and its contents but will enable researchers to better visualize spatial contextual relationships and facilitate taphonomic analyses. An accessible, online, interactive version of the digital twin will be available to guides and the interested public as well.

Rissolo, Dominique [321] see McAvoy, Scott

Rissolo, Dominique [276] see Tucker, Carrie

Ritchey, Melissa (Washington University, St. Louis) and Grace Cesario (University of Iceland)

[48]

Savor Your Subsistence: Foodways at Kotið, a Small Viking Age Dwelling in Northern Iceland

We present food production data from the 2022–2023 excavations at Kotið, a small, non-elite Viking Age (ninth century AD) domestic dwelling located in Skagafjörður, north Iceland. Macrobotanical and zooarchaeological remains provide key data to better understand early subsistence strategies, including hunting, fishing, animal husbandry, wild plant gathering, and cereal cultivation. Little is known about the role small domestic sites such as Kotið played in the political economy and ecology of the early Icelandic settlement period, but the evidence for cereal cultivation, livestock consumption and fishing begin to tell a dynamic story of early Icelandic foodways.

Ritchey, Melissa [179] see Sun, Yufeng

Ritchison, Brandon (University of Illinois, Urbana-Champaign), Lindsey Cochran (East Tennessee State University), Matt Howland (Wichita State University) and Brett Parbus (University of Georgia)

[104]

All That Glitters (for Now): Multi-method Approaches to Informing the Archaeological Response to Sea-Level Rise on the Golden Isles of Georgia

The immense and unprecedented challenge posed by sea-level rise will require archaeologists to combine

efforts and expertise in multiple disciplines and realms of practice. Whether from the perspective of salvage, mitigation, preservation, or triage, cultural heritage professionals are engaging with myriad data to develop contextually situated responses to the encroaching tides. Here, we describe recent archaeological investigations on the Georgia Coast that seek to inform contemporary responses to sea-level rise. Engaging with settlement records and paleoenvironmental data, we present analyses that will inform discussions on how archaeologists can, and should, consider localized, historically situated environmental impacts, coastal geomorphology, and the history of archaeological investigations as components in our collective response to climate change.

Ritchison, Brandon (University of Illinois, Urbana-Champaign)

[104]

Chair

Ritchison, Brandon [279] see Doubles, Catherine

Rivas, Sebastián [201] see Trujillo-Hassan, Daniela

Rivas-Tello, Daiana (Brown University)

[243]

Crafting Collaborations: Reflections on Collaborative Archaeology with the Community of Huancas (Amazonas, Peru)
In 2012, the Peruvian Ministry of Culture designated pottery from the town of Huancas (Amazonas, Peru) as Cultural Patrimony, celebrating the longevity of this crafting tradition that potters have maintained since the Late Horizon period (ca. 1470–1535). Due to the rise of tourism in Amazonas, interest in local archaeological sites has grown. In 2022, together with community members, local researchers, and students, I conducted archaeological fieldwork at seven sites in Huancas. This project was designed as a collaborative one, centering the interest of the Huancas community to learn more about these sites and better manage tourism. In this paper, I reflect on conducting collaborative work as an early career scholar and the challenges faced, particularly when a nation's history with Indigeneity complicates the notion of descendant communities (Herrera 2011). Collaborative archaeology requires time and trust, which is difficult for graduate students working with limited time and resources. However, there is no singular collaborative approach and projects can adjust based on self-reflection and sociopolitical context (Cipolla et al. 2019; Colwell-Chanthaphonh and Ferguson 2008; Wylie 2019). Through this case study of collaborative work in Latin America, I consider how early career scholars developing creative solutions have much to offer this discourse.

Rivera, Mario [242] see Miyano, Gentaro

Rivera I., Arturo, Sarah Baitzel (Washington University, Saint Louis), Laure Dussubieux (Field Museum of Natural History) and Nicola Sharratt (Georgia State University)

[50]

Exploring Production and Exchange of Post-Tiwanaku Cabuza-Style Ceramics (Southern Peru, Twelfth Century CE) through Visual and LA-ICP-MS Analysis

The dispersal of Tiwanaku-affiliated populations before and after the collapse of the eponymous state took on distinct cultural expressions throughout the western south-central Andean valleys. The proliferation of diverse Tiwanaku-derived ceramic substyles in the region signaled the emergence of local craft traditions and identities. Among these substyles, the Cabuza style represents long-term adherence to Tiwanaku vessel forms and design elements coupled with decline and innovation in production resources and technologies. Yet we know little about the practices and resources that define the Cabuza style, how it compares with contemporaneous Tiwanaku-derived styles, and the implications for the identity of its makers. Here, we present results of compositional and stylistic analyses of Cabuza-style ceramic fragments recovered from Los Batanes, a twelfth-century settlement in the Sama valley (Tacna, Peru). Consisting of serving and utilitarian

vessels, the Sama-Cabuza assemblage captures a broad range of production practices and choices. By comparing LA-ICP-MS data of an initial sample of Sama-Cabuza with compositional data from clay sources and contemporaneous post-Tiwanaku ceramic assemblages elsewhere in the region, we investigate the ways that compositional and qualitative attributes of Sama-Cabuza ceramics reflect diversified local practices and/or exchange of products and knowledge among post-Tiwanaku communities.

Rivera I., Arturo [199] see Eslinger, Emmalee

Rivera I., Arturo [223] see Diaz, Lucia

Rivera Prince, Jordi (Brown University)

[299]

Chair

Rivera Prince, Jordi (Brown University)

[299]

Life and Death after Chavín: A Comparative Mortuary and Bioarchaeological Analysis of Salinar from the Perspective of José Olaya-La Iglesia (Huanchaco, Moche Valley)

On the north coast of Peru, the collapse of the Chavín Sphere of Influence ca. 500/400 cal BC had a marked impact that brought about sociopolitical changes within the Moche Valley. For many years, archaeologists have investigated structural changes (e.g., settlement patterns and architectural shifts), violence, and altered subsistence patterns in the subsequent Salinar (ca. 400–50 cal BC). Here, I present data on a large mortuary ($n = 112$) and bioarchaeological ($n = 84$) analysis of a Salinar cemetery excavated at the José Olaya-La Iglesia site, Huanchaco (400–200 BC). Importantly, characterizing mortuary patterns and bioarchaeological of this coastal fishing community highlights notable intra- and intervalley similarities and differences with contemporary communities. I argue there are significant contributions to understanding life at the turn of the millennium in this region through the study of mortuary practices and bioarchaeological analyses that both support and challenge preexisting ideas of “Salinar.” *** Human remains will be shown in this presentation.

Rivera-Collazo, Isabel (University of California, San Diego) and Jenniffer Santos-Hernández (University of Puerto Rico, Rio Piedras)

[1]

Disasters in Temporal Context: Linking the Past and the Present: The RVCC Puerto Rico Hub

The IPCC sixth Assessment Report (2023) highlights that human-induced climate change triggers widespread and rapid changes that disproportionately affect communities in socially produced conditions of vulnerability to disasters. Academic convergence is needed as we search for solutions. Archaeology stresses that past instances of climate change can provide long-term perspectives of the conditions in which people have addressed livelihood challenges. Looking at the past provides transformative insights for developing tools to prepare for current and expected climate change impacts. However, mainstream disaster researchers often fail to capture the complexity of processes unfolding at local, meso-, and global scales; overlooking the limits of disaster risk governance or the complex ways in which societies—from governments to communities—respond to known, new, and unfolding risks. This presentation shares how the Puerto Rico RVCC Hub integrates different forms of knowledge, including those given and transmitted from the past, to advance a comprehensive understanding of disaster outcomes. Deep knowledge exchange that delves into how communities organize around risk improves the understanding of past instances where climate hazards could have triggered catastrophes. A more nuanced approach to examining the past improves how archaeology contributes to the construction of scenarios for an uncertain future.

Rivera-Collazo, Isabel (University of California, San Diego)

[148]

Sea-Level Rise, Climate Change, and the Geoarchaeology of Barbuda: A Systematic Survey of Seaview / Indian Town Trail
Sea-level rise, coastal erosion, and other climate-related hazards pose threats to coastlines around the world.

Understanding these nuanced processes sheds light on the risks that local communities and heritage managers face, as well as on the longer-term impacts of human activity over the coasts. This presentation shares the progress of our geoarchaeological research on Seaview and Indian Town Trail in Barbuda. Initial analysis identified the ecological and physical processes that changed coastal morphology as sea level rose from the Early Holocene to the present. These processes explain the erosion rate and coastal retreat of the extant coastal dune ridge that exposes the coastal lowlands to sea-level rise inundation under future climate scenarios. During the 2023 expedition, the NSF IRES International Research Effort conducted a systematic survey of Seaview and Indian Town Trail successfully assessing the severity of inland erosion and soil degradation, modern and historic uses of the land, the distribution of archaeological refuse, and the relationship between those two important sites of the indigenous past of Barbuda. This type of study design is particularly urgent for tropical oceanic islands, where accelerated climate change and disaster capitalism are pressing social vulnerability and threatening the continuity of islander identities.

Rivera-Collazo, Isabel [92] see Morris, Margaret

Rivero Weber, Lilia (Programa Universitario de Estudios Sobre la Ciudad, UNAM) and Nelly Robles García (INAH)

[160]

La Cueva de las Manitas: Conservación y arqueología experimental

Cueva de las Manitas is located in the municipality of Cuicatlán, in the state of Oaxaca, Mexico, a place that is part of the Tehuacán-Cuicatlán Biosphere Reserve (RBTC). It is a rockshelter painted with anthropomorphic elements such as human bodies and hands (the reason for its name), zoomorphic, and symbolic elements. Complementing the paintings are other artistic manifestations, including sculptures and natural figures, which were intentionally completed to make them look like fantastic faces. The stratigraphic sequence that has begun to be revealed denotes a long occupation of the cave, extending from hunter-gatherers' occupation to modern times. Many important studies are taking place giving us amazing news on the cultural significance of this cultural heritage. In this paper we will present evidence of the tools used for the creation of the paintings. In addition, the results of experimental archaeology will be presented to understand the creative process, the organic materials utilized, and generate a hypothesis for the meaning of this rock art. Evolving knowledge about the cave gathered through its excavation and conservation in the coming years, will expand public awareness of this region and its importance in the development of agriculture, which gave rise to civilization in Mesoamerica.

Rizvi, Uzma [150] see Smith, J. Gregory

Rizzuto, Branden (University of Toronto)

[76]

Precolumbian Metallurgy at the Late Moche–Transitional site of Huaca Colorada, Jequetepeque Valley, North Coast of Peru

Since 2009, the Late Moche–Transitional site of Huaca Colorada (ca. 700–900 CE), located in the Jequetepeque Valley on the North Coast of Peru, has been a focus for excavations by the Proyecto Arqueológico Jatunca-Huaca Colorada-Tecapa. These excavations have produced definitive evidence for the production and consumption of metal objects at Huaca Colorada. To date, more than 2,000 metal objects and hundreds of crucible, slag, and gangue fragments have been excavated from this site. Such an assemblage of materials spanning the entire metallurgical production sequence is rare at Moche and early Middle Horizon period (ca. 600–1000 CE) sites and thus presented a unique opportunity to investigate precolumbian metallurgy on the North Coast during this time. This paper presents a summary of the extensive typological and archaeometric analyses conducted on this assemblage to date. This dataset has been used to reconstruct the *chaîne opératoire(s)* of metallurgy at Huaca Colorada, and when combined with Bayesian chronological modeling of over 70 radiocarbon dates from the site, how these practices varied diachronically. The results

also elucidate the interrelationships between metallurgy and other craft production activities at Huaca Colorada, as well as the important role of metallurgy within the site's ritual economy.

Rizzuto, Branden [30] see Morrow, Giles

Roa, Ian (University of Pittsburgh), Ashley Sharpe (Smithsonian Tropical Research Institute), Claire Ebert (University of Pittsburgh) and Julie Hoggarth (Baylor University)

[318]

A Zoontological Approach for Examining the Role of Animals in Ancestral Maya Ritual and Society

Animals played a fundamental role in mythology and religion among the ancestral Maya. Iconography often depicts animals, including humans dressed as animals, taking part in feasts and ceremonial performances. Archaeologically, the remains of these important animals are recovered from ritual contexts such as burials, altars, caches, and other special deposits in elite contexts, suggesting the symbolic value of animals enhanced status relationships. This project combines theoretical approaches from social zooarchaeology with stable isotope analyses of animal remains to provide a "zoontological" view of ritual variability in the upper Belize River Valley region of the Maya lowlands from the Middle Preclassic through Early Postclassic periods (900 BC–AD 1250). Zooarchaeological data suggest variability in faunal assemblages among polities, perhaps indicating unique ritual economic systems at each site. Multi-isotope analyses (C/N/O/Sr/Pb) of animal skeletal remains facilitate the reconstruction of individual animal biographies, including their diet and geographical origins. Samples of more than 15 species of mammals, reptiles, and birds from ritual contexts identify instances of purposeful animal management and possible exchange. By generating animal biographies, results suggest the potential for isotope analysis in directly addressing the strategic ways people involved animals in interactions between the living and cosmological worlds.

Roa Solís, Constanza (Centro de Investigación en Ecosistemas de la Patagonia) and Carolina Lema (Sociedad Chilena de Arqueología)

[77]

Colonialidad y negociación de imaginarios: Una mirada a las relaciones williche-español desde el lago Ranco, Sur de Chile, siglos XVI-XVII

El pueblo williche o "mapuches del sur", reconocidos como tal al menos desde fines del siglo XVIII (Parlamento de Negrete 1793), habitaron el denominado Futa Willi Mapu. Al comparar con las áreas septentrionales del País Mapuche, este territorio tuvo una organización diversa, y según las fuentes, poco unificada; pero un aspecto relevante es que habría permanecido en gran parte "libre" del control directo del aparato colonial durante alrededor de dos siglos (1598/1604 a 1793/1796). No obstante, los escasos registros escritos y testimoniales, y sus interpretaciones historiográficas, dan cuenta del carácter particular de la relación entre estas parcialidades con los españoles, basado en los intereses propios de los colonizadores y aquellos de los dirigentes indígenas. El registro arqueológico indígena de esta época nos puede entregar luces respecto de aspectos socio-económicos y políticos de estas poblaciones, los cuales pueden complementar las fuentes históricas. En este trabajo discutimos aspectos organizacionales de las poblaciones del Futawillimapu (actual Región de los Ríos, Sur de Chile) y su relación con el aparato colonial, a partir del registro arqueológico de un contexto indígena ubicado a los pies de la Cordillera de los Andes, en la cuenca del lago Ranco.

Roberts, Jerod [332] see Castañeda, Amanda

Roberts, Patrick [303] see Caetano Andrade, Victor

Roberts, Seth [69] see Buckley, Gina

Roberts, Ted (UES)**[293]***Chair***Roberts, Ted (UES)****[293]***Alcohol Use and Archaeological Practice*

The role of alcohol in the practice and culture of American archaeology has rarely been critically investigated. Although most practicing archaeologists agree a link between alcohol use and archaeology exists, the nature of that dynamic is often left unexamined. There is little doubt that the consumption of alcohol serves some function or plays some part in the profession, but few systematic studies have been published exploring the attitudes, opinions, and feelings on the use of alcohol in archaeology. This paper seeks to explore current views regarding the consumption of alcohol in the culture of archaeology and how alcohol affects the agency and identity of archaeologists. This pilot study builds on a critical review of available literature with results of recent data derived from web-based surveys undertaken by practicing archaeologists and archaeology students ($n = 208$) in conference settings. These data are then used to provide possible context and implications to the complex correlation between alcohol use and archaeology/archaeologists in a profession rapidly undergoing seismic shifts in the way issues of inclusion, substance use, and appropriate conduct are viewed and prioritized in today's workplaces, campuses, and communities.

Roberts, Victoria [332] see Castañeda, Amanda

Roberts Thompson, Amanda (University of Georgia)**[73]***Chair*

Roberts Thompson, Amanda [176] see Conger, Megan

Roberts Thompson, Amanda [72] see Lofaro, Ellen

Robertson, Robin (University of Texas, San Antonio), Lauren Sullivan (University of Massachusetts, Boston), Laura Kosakowsky (University of Arizona, Tucson) and Fred Valdez Jr. (University of Texas, Austin)

[251]*Centering the Edge: The Preclassic Ceramics of Belize*

For many years the notion of a core (or center) versus periphery (or edge) dominated models of prehistoric Maya development. However, in 1979 David Freidel argued against the idea that there was a center or edge, asserting that the lowland Maya belonged to an interaction sphere. Many early models largely reflected modern political and linguistic boundaries, and ignored Belizean sites, which continue to be researched extensively in large measure because of the receptiveness of the Belize Institute of Archaeology to the excavation and analysis of prehistory in this geographically "edge" country. In this paper we will explore the Center versus Edge model with respect to Preclassic ceramics. From the earliest occupations, ceramics in Belize, an area described as part of the theoretical "edge" are, in fact, similar to those found at sites in Mexico and Guatemala. The general pattern is one of mutual engagement, reinforcement, and innovation in prehistory, leading to the conclusion that there is no center or edge in the data and should not exist in its interpretation.

Robertson, Sarah [266] see Kress, Yakira

Robin, Cynthia (Northwestern University), Antonio Beardall (Texas State University), Cynthia Ellis-Topsey (Garifuna Ambassador) and Anabel Ford (University of California, Santa Barbara)
[295]

Community Archaeology in Belize

This paper examines community archaeology in Belize: its recent history and contemporary practice. Community archaeology, following the work of Sonya Atalay, is archaeology done “with, by, and for” Indigenous and local communities. It produces an archaeology that is vibrant and meaningful for local and research communities alike. We present examples of community engaged archaeological research from across Belize and from the work of each of the coauthors. Our case studies illustrate the importance of collaboration between researchers, local, and Indigenous communities and the role of education and public engagement across generations. We demonstrate how community archaeology in Belize is on the forefront of advancing both knowledge-making and the practice of archaeology in Belize and is an example for archaeologists working elsewhere in the Maya area and across the globe. Community archaeology produces a better archaeology for communities and researchers enhancing all aspects of the archaeological process and its outcomes.

Robinson, Andrew [150] see Clark, Andrew

Robinson, Charlotte (University of New Mexico)
[172]

Amazonian Wetland Domestication: A Spatial Analysis of Precolumbian Zigzag Features in Lowland Bolivia

Recent archaeological studies show that precolumbian communities began modifying southwestern Amazonia approximately 3,500 years ago. Previous research within lowland Bolivia has primarily focused on the fields and forest islands that populations built to elevate themselves and their crops from seasonal flooding. However, a series of zigzag earthworks found in the 1990s to the east indicate that ancient communities may have harnessed floodwaters to catch fish. This study collects and analyzes spatial data from other recently identified zigzag features in the West Central Llanos de Mojos (WCM), demonstrating that these earthworks form potential wetlands with the capacity to affect water flow and accumulation for over 600 m² of land. Results indicate that potential wetlands are distinguished by two unique patterns of zigzag features, which differ in size and relationships to major bodies of water and nearby anthropogenic features. Large-scale environmental transformations of this kind would increase the duration and scale of wetlands, including riparian habitats and resources that ancient communities could have exploited. This suggests that anthropogenic landscapes within WCM are more complex than previously thought and that inhabitants may have intentionally manipulated water to bring wetlands under their control.

Robinson, Erick (Native Environment Solutions LLC; Arizona State University)
[219]

Chair

Robinson, Erick (Native Environment Solutions LLC; Arizona State University), Judson Finley (Utah State University), Chelsea Cheney (US Forest Service), Carlton Shield Chief Gover (Indiana University, Bloomington) and Jacob Freeman (Utah State University)
[219]

Integrating Low- and High-Precision Chronologies in North American Archaeology

Many archaeologists have questioned the value of using aggregated radiocarbon ages as a proxy measure of past human population growth. Most of these criticisms revolve around the lack of precision in these aggregated approaches. Higher-precision Bayesian approaches have often been presented as a better alternative. However, Bayesian approaches have their own limitations, especially when it comes to theory building and research design. This presentation proposes a new multiscale theory of human population growth that relies on the integration of low- and high-precision chronologies. We present two different case

studies illustrating how high-precision Bayesian chronologies confirm low-precision summed probability distribution approaches. We propose that Bayesian approaches will be most valuable for theory building and hypothesis testing when they are integrated with aggregated, coarse-grained chronologies. We pay tribute to Bob Kelly's vital role in making this future possible.

Robinson, Erick [107] see Finley, Judson

Robinson, Erick [219] see Lee, Craig

Robinson, Eugenia (Tulane University), Marlen Garnica (San Carlos University, Guatemala) and Sorayya Carr (Independent Researcher)
[244]

Water, Creation, and Celestial Phenomena at La Casa de las Golondrinas, Guatemala

La Casa de las Golondrinas is a Mesoamerican sacred rock art and pilgrimage site located in the southern end of the Antigua Valley in the central highlands of Guatemala near water sources and routes of travel. Recently, mapping efforts have found that the natural site, 500 m long, was culturally structured with hundreds of images and many Precolumbian structures. This paper will focus on motifs and features recorded by the Proyecto Arqueológico del Área Kaqchikel (PAAK) that are concerned with water and by extension rain-making, and the interwoven life forces of creation, fertility, reproduction, and cycles of time. The images also include references to sky-related phenomena including the sun, the moon, Late Postclassic deities, and constellations. This paper will discuss these images with reference to the Mesoamerican ethnographic literature and the social and physical contexts of the images.

Robinson, Eugenia (Tulane University)
[292]

Discussant

Robinson, Madeline [197] see Franklin, Lauren

Robinson, Mark (University of Exeter), Keith Prufer (University of New Mexico), Nadia Neff (University of New Mexico), Richard George (University of California, Santa Barbara) and Douglas Kennett (University of California, Santa Barbara)
[217]

Domestic Space and Food Production in the Mesoamerican Neotropics during the Early Holocene

Discussions on the peopling of the tropics have tended to characterize tropical forests as barriers to early human foragers due to the difficulties in obtaining sufficient nutrition from hunting and foraging activities. New research on these pioneering settlers is transforming our understanding of ancient subsistence practices and migration, ecological adaptation, and cultural developments in the tropics. We present data from the Maya Mountains of southern Belize, where we document food processing from contexts over 9,000 years old. Our data document food management strategies from shortly after the Younger Dryas as evidenced by intensive use of grinding stones for plant processing. We document an early Holocene plastered domestic space as well as cobbled living surfaces. These data were generated with a focus on high precision chronologies and demonstrate the active engagement of early peoples with plant resources and investment in landscapes with profound implications for cultural and environmental trajectories.

Robinson, Mark [217] see Garay-Vazquez, J. Julian

Robinson, Mark [155] see Iriarte, Jose

Robinson, Mark [217] see Prufer, Keith

Robinson, Rebecca (HKBU)**[26]***Make a List, Check It Twice: Bureaucratic Surveillance in the Early Chinese Empires*

The early Chinese Empires, the Qin and Han, governed their lands and peoples using an army of bureaucrats who were responsible for, among other things, creating a vast quantity of administrative documents. Of particular interest to the state was the population—the governments kept population registries, updated annually, which not only provided them with relevant information for taxation and labor obligations but also served to tie individuals to their place of registration, preventing them from moving about the empire or taking on new identities. Recently excavated documents have revealed the extent of the states' attempts to track the population and enforce compliance with laws. This paper shows that the creation and maintenance of these physical records was a fundamental part of state population surveillance. The documents, census records, and administrative lists, usually written on wooden boards and created with the assistance of the population, were visible examples of the state's monitoring of the population. Not only did the state have information about the people but the people knew that the state was watching, and that the extensive documentation would make it difficult for anyone to escape state surveillance.

Robitaille, Jerome (Monrepos, LEIZA), Lisa-Elen Meyering (Durham University, UK), Sabine Gaudzinski-Windheuser (Monrepos, Leiza, Germany), Olaf Jöris (Monrepos, Leiza, Germany) and Paul Pettitt (Durham University, UK)**[93]***Unraveling the Complexity of Magdalenian Engravings on Gönnersdorf Plaquettes: Investigating through Manual and Controlled Robotic Experiments*

Our AHRC/DFG-funded Household Art project explores the content and wider context of the 15,800-year-old Gönnersdorf/Andernach Upper Paleolithic engraved plaquettes (portable schist) curated at MONREPOS, Neuwied (Germany). We use state-of-the-art 3D scanning microscopic and use-wear technologies in MONREPOS'S TraCEr laboratory and visual psychological experimentation including virtual reality conducted at Durham University (UK) to identify individual engravers, their personal idiosyncrasies, and the extent to which their engraving was influenced by the natural shape of plaquettes (pareidolia). This adds to our understanding of the art's positioning and importance in a Magdalenian domestic environment. We discuss current results, including the hand-preference of artists, the sequence of engravings, and the reuse of plaquettes over time.

Robitaille, Jerome [141] see Meyering, Lisa-Elen

Robles, Erika (Harvard University)**[79]***Chair***Robles, Erika (Harvard University)****[79]***Jewels, Flowers, and Paper Bows: Ornaments on Instruments for Sacrifice and Self-Sacrifice in Nahua Prehispanic Art*

By analyzing the codices, ceramics, and prehispanic sculpture, it is possible to identify different instruments employed both for the extraction of blood itself and for the sacrifice of victims. In these sources, maguey spines, bone awls, flint knives, and even the quadrangular stones where the victims lay during the sacrifice were adorned with jade or turquoise beads, flowers, paper bows, and feathers, among other symbolic elements. These ornaments manifested concepts of fertility, preciousness, perfection, blood, sacrifice, and self-sacrifice. However, there is a distinction between the artifacts destined for sacrifice and those intended for self-sacrifice, since they form sets not only for their function but also for their ornaments. Likewise, the archaeological context has revealed the existence of bejeweled bone awls, suggesting that the artifacts used for ritual penance could have been lavishly adorned as shown in the artistic images, reinforcing both their purpose and their symbolism.

Robles García, Nelly (Instituto Nacional de Antropología e Historia)**[160]***Discussant***Robles García, Nelly (Instituto Nacional de Antropología e Historia), Saburo Sugiyama (Arizona State University), Yuma Takada (Okayama University, Japan), Damián Martínez (Instituto Nacional de Antropología e Historia) and Miguel Ángel Galván (Instituto Nacional de Antropología e Historia)****[239]***New Perspectives of Monte Albán-Atzompa Complex through New Lidar Mapping Survey*

Monte Albán, the central mountain area in the Oaxaca Valley was largely modified around 500 BC and functioned as a ceremonial precinct and state headquarters for more than 1,300 years. As one of the objectives under the umbrella program of “Out of Eurasia,” we here explore the worldview, the underlying conception of time-space that was often materialized in calendar systems, and the cognition of nature and human communities. We focus on the astronomical alignments of cities, specific buildings, and the general site orientations retrievable from our precise maps in the whole valley’s contexts, and examine them by ArcAstroVR, a new archaeoastronomy program, built on Stellarium. We are recording all architectural features, sculptures, murals, and elite tombs, with multiple strategies, including drone-mounted lidar, Slam-lidar, 3D scanners, and photogrammetric devices. We mapped more than 17 km² covering most of the Monte Albán-Aztompa complex, recoverable today in a modern urban expansion context, for the first time to three-dimensionally reconstruct one of the largest and oldest hilltop urban centers in Mesoamerica. As a final goal, we search how governments integrated their rulership into the human cognitive systems and materialized their honor systems in monuments, cityscapes, landscapes, and skylscapes.

Robles García, Nelly [160] see Rivero Weber, Lilia

Robles Martínez, Edsel Rafael [12] see Sugiyama, Nawa

Rocek, Thomas [96] see Kvetina, Petr

Rocks-Macqueen, Doug [141] see Aitchison, Kenneth

Rockwell, Heather (Salve Regina University)**[20]***Dispatches from an Archaeological “Backwater”: Microwear as a Proxy Measure of Paleoindian Landscape Use in the Far Northeast*

Archaeologists have been examining and publishing on the fluted point period for over a century. However, the northeastern United States has received comparably less attention from the professional discipline, with one colleague describing prehistoric archaeology in New England as an archaeological backwater. This may be in large part due to the added complexity of working in the area. Unstratified, shallow buried sites, containing few to no organics are the norm in this region, leaving archaeologists with little more than lithic artifacts to interpret human behavior. I examined stone tool assemblages from a wide range of archaeological sites in the region dating to the fluted point period and based on their inferred uses combined with interpretations of occupation span I argue we can see evidence of seasonally specific behaviors. I further argue that the northeast offers unique opportunities to address questions of landscape use and colonization at the end of the Pleistocene. Far from being an archaeological backwater, this challenging region provides us with superior temporal control untainted by questions of Pre-Clovis. And holds important implications for the archaeological visibility of colonizing populations.

Rockwell, Heather [335] see Celia, Claudia
 Rockwell, Heather [219] see Kitchel, Nathaniel

Roddick, Andrew (McMaster University)
[250]

Improvisation and Creativity at an Emergent Andean Center

Ann Stahl continues to produce a rich, and provocative scholarship, one that has inspired scholars across regions and generations. She has long positioned herself within “intellectual crosscurrents,” drawing on literature from a wide range of disciplines. Most recently, this has resulted in a critical reflection on creativity and improvisation (Stahl 2019). In this paper, I engage Stahl’s writing on creativity in a region quite far from Banda, Ghana. I explore how her thinking on creativity might productively shift Andeanists away from lingering structuralist tendencies. I focus on Tiwanaku, a center of Andean creativity during initial urbanization in the fifth and sixth century AD. Specifically, I consider the creativity and improvisation associated with early (cal AD 420–590) polychrome Qeya ceramics and the various aesthetic communities of practice implicated in their complex itineraries. I deploy some of Stahl’s strategies to investigating generative processes and examine how some of the analytical spaces for investigating creativity might help us reframe the practices associated with these evocative materials.

Roddick, Andrew [87] see Prado, Shalen
 Roddick, Andrew [248] see Vranich, Alexei

Rodning, Christopher (Tulane University)
[1]

Chair

Rodning, Christopher (Tulane University) and Sissel Schroeder (University of Wisconsin)
[154]

Archaeology of Dugout Canoes in Global Perspective

Dugout canoes, typically made by felling trees then hollowing out logs by burning and chipping, are a widespread form of watercraft throughout the world, and one with great antiquity. There are archaeologically known dugouts from Europe, Africa, Asia, and the Americas, as well as from Australia and Oceania. Early examples of dugouts date to as much as 8,000 years ago, dugouts have persisted even as other kinds of watercraft have been devised and developed, and people still make dugouts for water travel in some parts of the world today. This paper introduces a symposium about the archaeology of dugout canoes, canals and portages associated with dugout canoe travel, replicative studies of building dugouts, and modeling patterns of canoe travel in the past by outlining a global perspective on the significance of this form of watercraft to peoples of the past. Many papers in the symposium concentrate on dugout canoes in particular areas of the Americas, and we therefore review here some ethnohistoric and archaeological background from these areas. We also consider the contributions that archaeology of dugouts and dugout canoe travel in the Americas can make to broader conversations about the archaeology of traditional and vernacular forms of watercraft worldwide.

Rodning, Christopher [253] see Beck, Robin

Rodrigues, Teresa [88] see Chavez, Hannah
 Rodrigues, Teresa [88] see Medchill, Brian

Rodríguez-Alegría, Enrique [246] see Miller Wolf, Katie
 Rodríguez-Alegría, Enrique [50] see Millhauser, John

Rodríguez-Álvarez, Xose [162] see De Lombera-Hermida, Arturo
 Rodríguez-Álvarez, Xose [162] see Mosquera Castro, Tania

Rodríguez-Franco, Cristina [108] see Lopez, Kirsten

Rodríguez Galicia, Bernardo [152] see Valadez Azúa, Raúl

Rodriguez Obregon, Daniela (Universidad Nacional Autónoma de México) and Emiliano Melgar Tísoc (Museo del Templo Mayor)

[290]

Lapidary Objects from a Funerary Context: The Origin to the Last Abode

Within the daily activities of a population, there were the events of the death of community members. These practices led the population to look for certain objects that needed to be placed next to the deceased people in the burial process with different functions and meanings. But what is the life story of these items? Was the raw material local or foreign? Did the villagers make the ornaments by themselves, or did they get them already manufactured? Questions like these have been our starting point for the application of archaeometric techniques that have allowed us to know the origin of the resources and the forms of production that were used for the elaboration of these artifacts. Our case of study focuses on a sample of lapidary ornaments from the Zacatenco site located in the Basin of Mexico. We have applied analyses such as X-ray energy dispersion spectroscopy and traceology, and the results have helped us to review the proposals that exist about the interaction networks that were developed during the Formative period.

Rodriguez Osorio, Daniel (University of Texas, San Antonio)

[155]

Chair

Rodriguez Osorio, Daniel (University of Texas, San Antonio)

[155]

Overcoming Centralization in the Ancient Sierra Nevada de Santa Marta: Toward a Novel Model of Indigenous Low-Density Urbanism in Northern Colombia

This paper develops a novel model to understand the social organization of landscapes and urban settlements in the Sierra Nevada de Santa Marta. This region's history mainly stems from the imposition of European categories to interpret the sociopolitical organization of Indigenous communities, often suggesting that the very chiefs and ethnonyms that emerged in the colonial era had always existed. Said imposition introduced and reified ethnic and cultural categories, such as Tairona, Taironaca, Betoma, Posigüeica, and Carbón. Later, scholars drew on these colonial documents and often proposed that "the Tairona" were the most powerful chiefdom in the Sierra Nevada, concealing the other communities and peoples throughout the area. This account led archaeologists to expect evidence of political centers from which wealthy elites presided over smaller villages and subject populations. In consequence, and despite earlier reports of hundreds of ancient stone settlements beneath the tree canopy, most archaeological research has largely focused on Teyuna-Ciudad Perdida and Pueblito. This paper presents evidence from recent surveys, mapping, architectural analysis, and excavations that reveal a different scenario: a multi-centric or even noncentralized urban landscape, a case of low-density urbanism that redefines theories of this coastal mountain range of northern Colombia.

Rodriguez Ramos, Reniel (Universidad de Puerto Rico)

[127]

Early Occupations of the Mountainous Interior of Puerto Rico

Recent excavations conducted in three cave sites in north-central Puerto Rico have revealed that human

occupation of the mountainous interior of the island took place much earlier than previously thought. The available evidence, recovered from Cueva del Abono, Cueva Matos, and Cueva Ventana, has shown that important developments in the Indigenous history of Puerto Rico such as the origins of food production, pottery manufacture, and the development of rock art traditions were manifested in the central part of the island since its earliest phases of occupation. In this presentation, the evidence that has been recovered thus far will be presented in order to address its implications for our current understanding of the discoverers of the island.

Rodriguez Ramos, Reniel [127] see Stone, Jessica

Rodriguez-Rellan, Carlos (Universidad de Granada) and Ramón Fábregas Valcarce (Universidade de Santiago de Compostela)

[162]

Cutting Through the Networks: An Assessment of the Circulation of Singular Artifacts in Prehistoric Iberia

In this paper, we aim to analyze a collection of singular artifacts recovered from various sites in the Iberian Peninsula, spanning from the Early Neolithic to the Early Bronze Age (approximately 5600–1800 BCE). Our primary focus will be on investigating the patterns of circulation and exchange of polished axes and adornments made on green stone, which made it possible for these artifacts to be distributed across much of the Iberian Peninsula. To achieve this objective, we will conduct a comprehensive analysis of a database containing over 50,000 artifacts. Our analytical approach will encompass a variety of methods, including spatial statistics and network analysis.

Rodríguez Reyes, Judith [278] see Hernandez-de-Lara, Odlaner

Rodriguez-Sama, Silvia (University of Colorado)

[27]

Chavín and Its Galleries: An Inside View of the Andean Formative Period

Understanding the unique gallery system at Chavín de Huántar has been one of the PIACCh's primary goals over the past 30 years. Research objectives that began in the mid-1990s with the challenge of simply making accurate maps of these internal spaces, evolved to address broader questions ranging from ancient construction principles and design language to architectural growth and chronology and ritual uses and ideology—and how these changed over time. To investigate these topics the project applied numerous methods including digital mapping, architectural analyses, excavations, remote sensing, digital scanning, chronometric methods such as radiocarbon dating of architectural mortar and optically stimulated luminescence (OSL) dating of construction materials, acoustical studies, and robotic exploration. This paper highlights some of the important results of this work. It then examines a case study of galleries within the main temple building (Building A) as well as the building south of the Plaza Mayor, considering directions for future research. The view from Chavín's galleries reveals profound insights that these enigmatic spaces bring to our understanding of the Andean Formative period, emphasizing their fundamental role in the site's physical and ideological growth while underscoring the need to research architecture as an independent variable and data source.

Rodríguez Yábar, Alexis [281] see Dalton, Jordan

Roemer, Aubrey (University of Tennessee)

[165]

Tracing Marks in the Dark: Documenting Mud Glyph Cave by Drawing on Methodology of the Past and Present

Since the rediscovery and canonization of Paleolithic and precontact cave art, researchers have grappled with

different ways to document and reproduce sites containing ancient artwork. Early methods utilized hand drawing in situ and, soon after, cave art reproduction included film photography. Later, digital photography became the primary mode of capturing ancient artwork. Contemporary methodology uses photogrammetry, 3D modeling, VR, and AR to transport us to the artwork through digital realities. This paper focuses on the synthesis of traditional methods of drawing, analog photography, digitization methods, and design technology for creating an archive of the Southeast cave art site, Mud Glyph Cave. The artwork of Mud Glyph Cave is comprised of drawings, impressions, incisions, smoothing, and other types of surface preparation that are encased in Pleistocene mud deposits. The simultaneous homogeneity of the surface color and the complexity of surface development in Mud Glyph Cave presents a unique challenge for art reproduction. Drawing on past and present technological methods, this research demonstrates a novel approach to documenting ancient 3D cave art that is created solely in clay.

Roemer, Erwin

[192]

"Natural" Resources Land Conservation Ignores Archaeological Resources?

Natural resources conservation arrangements, including easements on land, have existed in the US for many years, with origins in the Conservation Movement dating to the time and efforts of T. R. Roosevelt. In recent years, the land conservation movement has grown across the US and often involves support from national, state, and local governments partnering with nonprofit organizations. Factors such as climate change, for example, are increasingly in the mix for the goal to protect land from development that harms plants, animals, and ecology that otherwise would exist as a "natural" system benefiting air, water, and other conditions for sustaining quality of life. In this presentation I will discuss why I occasionally put the term "natural" in scare-quotes, the physical impacts of natural resources conservation, some major players and programs, and why I believe protection of archaeological sites often is on the losing end of natural resources conservation arrangements, particularly where federal funding is involved. I will cite some examples such as from the US Department of Defense and also touch on Native American involvement regarding this issue.

Rogers, Ashleigh (Monash University)

[145]

Aquaculture in the Ancient World: Ecosystem Engineering, Domesticated Landscapes, and the First Blue Revolution

Aquaculture is the world's fastest growing food sector and accounts for more than 50% of the world's fish food supply. The significant growth in global aquaculture since the middle of the twentieth century has been dubbed the Blue Revolution. However, it is not the first Blue Revolution to take place in human history. While historically classified as low-ranking, seasonal, or starvation resources in the archaeological discourse, marine foods were vital resources that ancient communities developed and exploited using a vast array of strategies. Among these aquatic strategies was aquaculture. This first Blue Revolution was initiated during the early Holocene, some 8,000 years ago in China, with archaeologists now documenting aquaculture across the globe. This presentation considers the commonalities between ancient aquacultural systems including evidence of ecosystem engineering and the development of domesticated landscapes as production systems. These aquaculture systems were maintained for centuries, if not millennia, and enhanced and diversified key aquatic resources. Worldwide research conducted on ancient aquaculture can provide critical insights into developing more ecologically sustainable, resilient, and diverse marine production systems for coastal communities today, thus achieving industry sustainability and limiting negative environmental impacts to the world's shorelines and overexploited fisheries.

Rogers, Jaime [232] see Pluckhahn, Thomas

Rojas, Hoover [176] see Muro Ynoñán, Luis

Rojas-Pelayo, Lisseth**[27]**

Chair

Rojas-Pelayo, Lisseth**[27]**

Transiciones en cuerpos y espacios: Acercamiento a las prácticas funerarias desplegadas en Chavín de Huántar a finales del Formativo

Tras el cese del funcionamiento del centro ceremonial de Chavín, el área fue reocupada por los grupos Huarás, Mariash y Callejón, quienes construyeron unidades domésticas en espacios antes considerados como rituales. El punto que llama nuestra atención es la transición entre la ocupación chavín y la implantación de comunidades Huarás. Esta transición debe ser entendida como un cambio abrupto que implicó materialidades totalmente distintas. Así, observamos un enfoque en la desacralización de espacios a través de la reutilización consciente y destrucción de iconografía chavín como parte de un probable programa de “asesinato ritual”. En esta investigación buscamos aproximarnos a las prácticas funerarias ejercidas en un espacio clave y poco usual, la galería 4 al este de Caracolas. En esta estructura encontramos los restos de dos comunidades: una Chavín, asociada a la clausura del espacio; y otra, Huarás vinculada a entierros intrusivos. Esta superposición de contextos formaría parte de la dinámica de posicionamiento de los nuevos grupos quienes emplearon los restos corporales de individuos como vínculos físicos legitimando su presencia mediante la construcción de una memoria corregida. En consecuencia, los cuerpos y las prácticas funerarias desempeñan un papel político al comunicar un nuevo orden y la ruptura con el pasado.

Rojas-Pelayo, Lisseth [27] see Acero-Shapiama, Erick

Rollefson, Gary [139] see Rowan, Yorke

Roman Vargas, José (Universidad Sorbona de Paris), Henry Tantaleán (Universidad Nacional Mayor de San Marcos), Charles Stanish (University of South Florida) and Carito Tavera-Medina (Universitat de Barcelona)

[299]

Conociendo a los Paracas del Valle de Chíncha a Partir de la Cerámica Doméstica: El Caso de Pozuelo (Costa Sur del Perú), durante el Horizonte Temprano (500-200 aC)

Nuestro trabajo investiga la función social de la cerámica paracas del sitio arqueológico de Pozuelo. Todo lo que se conocía de este asentamiento es que contuvo la cerámica más antigua del valle de Chíncha denominado como «estilo Pozuelo». No obstante, nuestras investigaciones han demostrado una fuerte ocupación vinculada con el «estilo Paracas» entre los 500-200 aC del Horizonte Temprano. Precisamente, durante esta época en el valle bajo surge una gran explosión de sitios monumentales asociado con una cerámica finamente decorada. Sin embargo, desconocíamos la ubicación de las esferas domésticas que mantuvieron relaciones sociales detrás del consumo de cerámica no decorada. Hasta el momento, Pozuelo es el único sitio del valle que ha evidenciado una alta concentración de cerámica utilitaria o doméstica. En virtud de los resultados ceramológicos y contextos arqueológicos podemos señalar que la cerámica paracas de Pozuelo cumplió la función social para la preparación y consumo de alimentos. Asimismo, el hallazgo de alisadores y platos de alfarero señalan que los núcleos domésticos estarían produciendo cerámica en el mismo sitio y sus formas estarían siendo adoptadas por las elites de habitaron en los edificios monumentales; en tanto, estas similitudes entre las formas evocarían identidad social entre ambas esferas humanas.

Roman Vargas, José [299] see Tantaleán, Henry

Romero, Annette [140] see Breslawski, Ryan

Romero, Levi (University of New Mexico)**[84]***Vecinos: The Symbiotic Relationship between Picuris Pueblo and Its Indio-Hispano Neighbors*

This presentation seeks to capture the rewards of a neighboring progression that moves away from past conflicts toward reconciliation forming a new history between the Pueblo and Indio-Hispano people. Inter-communal exchanges between the Spanish and Pueblos helped them to endure droughts, famines, diseases, and the eventual encroachment of a new social system foreign to both of their cultures. The commemoration of feast days in the pueblos and in the villages brought them together in times of plenty and in celebration of the planting and harvesting seasons and other festive occasions throughout the year. Occasions like these forged enduring relationships among individuals and families alike. There are stories that recount the knowledge and wisdom of shared methodologies of agriculture, architecture, food preparation and preservation, religious traditions, rituals, acequia systems, and water harvesting. What has endured through the ages are stories that capture a holistic and balanced life within their shared *querencias*, stories of blessings and offerings, of birthing and of dying, of giving and receiving.

Romero Aranda, Víctor Hugo, and Mari Carmen Serra Puche (Instituto de Investigaciones Antropológicas UNAM)**[214]***Indicadores arqueológicos de la identidad de los pobladores de Xochitecatl-Cacaxtla durante el Epiclásico*

La cuestión relacionada con los grupos que reocuparon el asentamiento de Xochitecatl-Cacaxtla durante el periodo Epiclásico nos permite seguir preguntándonos quiénes eran y su lugar de procedencia, lo cual ha sido atribuido a cierto grupo étnico o a alguna cultura arqueológica definida por diferentes investigadores. Tenemos claro que la viabilidad de cualquier propuesta en torno a una relación filogenética y cultural entre alguna de las regiones de Mesoamérica y el asentamiento de Xochitecatl-Cacaxtla supone demostrar que existió algún tipo de interacción, principalmente al final del periodo Clásico y al inicio y desarrollo del Epiclásico, la cual tendría que manifestarse en ciertos aspectos sociales y culturales identificables en los registros arqueológicos. Por todo lo anterior, en este trabajo presentamos las evidencias arqueológicas que nos permiten suponer que entre el sur de la cuenca de México, específicamente la región de Chalco-Amecameca, y el asentamiento de Xochitecatl-Cacaxtla existieron estrechos vínculos filiales y culturales que nos sugieren acerca de la identidad y del origen de los grupos que reocuparon el viejo asentamiento al final del periodo Clásico y al inicio y desarrollo del Epiclásico en el Altiplano Central.

Romero Padilla, Laura**[320]***Ritual Cave Utilization in the Middle Usumacinta Region: Sociopolitical Implications of Ritual Cave Use at the Maya Residential Sites Associated with Piedras Negras*

In this paper, I will examine the significance of ritual cave use in the emergence and development of Classic Maya polities. Caves are critical settings to understand the diversity of ritual practices and the involvement of such contexts within sociopolitical systems. My work in caves in the Middle Usumacinta Valley will further our understanding of ritual as a powerful venue to negotiate political power between Piedras Negras and its subsidiary minor centers while conflicts were ongoing with neighboring Yaxchilán during the Classic period (AD 250–900). In the summer of 2022, I conducted a field season in Nueva Esperanza Progresista in Chiapas, Mexico. Fourteen caves were mapped and recorded near the secondary center of Budsilhá which was administered by Piedras Negras. My preliminary observations of cave contexts from outlying areas of Piedras Negras and near its secondary centers suggest notable differences in the performance of local practices inside these caves as attested by the presence of rock paintings and unslipped and decorated ceramics. By diachronically investigating cave sites, and by tracing differences in ritual practices, I hope to understand how ritual cave use shaped sociopolitical organization and power dynamics between mid-level groups and major polities in Classic Maya society.

Roney, John [149] see Hard, Robert

Rönnlund, Robin (University of Gothenburg)

[62]

Bending the Urban Narrative: Cyclic Cities in Ancient Greece

The urbanization of human settlements is commonly seen as a relatively linear development beginning in the earliest sedentary communities of the Neolithic and ending with the international megalopolises of the present day. A closer scrutiny of the archaeological record, however, clearly shows that this narrative has little bearing on the factual situation. Using the example of the developments in ancient Greece (700 BC–AD 500), this paper explores the cyclic nature of urban life, and how urbanization and de-urbanization are tightly tied to political agendas and not the given outcome of organic population growth.

Rooney, Matthew (Arkansas Archeological Survey)

[227]

Community Archaeology with Descendants of the Enslaved at an Arkansas Plantation

The Hollywood Plantation in southeast Arkansas was a place where over 100 enslaved African Americans labored to improve the land and generate profits for their enslavers for decades following the cession of Indian lands there in 1818. Following emancipation, the enslaver and his descendants converted the plantation into a profitable business exploiting the labor of hundreds of sharecropper and tenant families, the majority of them Black migrants from eastern states. Research conducted over the past two years started with genealogy and connecting with the descendants of this African American community and investigating spaces associated with their ancestors away from the Big House. So far, archaeological investigations have been conducted at two sites: a slave cabin and a sharecropper house. Work has also been done to rehabilitate and interpret multiple Black cemetery and church sites across the historic 12,000-acre plantation property. Investigators also partnered with Fayetteville's Pryor Center to create an online oral history channel featuring the voices of people who worked as sharecroppers on the plantation in the early 1900s. This paper will review the results so far and show how archaeologists can work with descendants to interpret the past in a way that honors their African American heritage.

Roos, Christopher (Southern Methodist University), Julie Field (Ohio State University) and John Dudgeon (Idaho State University)

[303]

Deforestation of Pacific Islands Driven by a Combination of Land Use, Fire, and Climate

Remote islands in the Pacific Ocean experienced dramatic environmental transformations after initial human settlement in the last 3,000 years. Human causality of this environmental degradation has been largely unquestioned, but examination of regional records suggests a role for climate influences. Here we use charcoal and stable carbon isotopes from deep soil cores to reconstruct the dynamics of fire activity and deforestation across the Sigatoka River valley on the leeward (dry) side of Viti Levu, Fiji. Fires and pyrogenic patches of grassland predated human settlement by millennia, but the magnitude of fire activity and landscape transformation accelerated with the establishment and expansion of swidden agriculture. Regional comparisons with previous studies in Fiji and elsewhere in Remote Oceania settled between 3200 and 2900 BP reveal a similar pattern of pre- and post-settlement fire activity and landscape change. Pre-settlement fires generally corresponded to droughts, probably driven by El Niño, often correlating with drought-driven wildfires elsewhere in the region. Post-settlement, charcoal and C₄ grasses increased dramatically but nearly all major peaks in charcoal and grasses corresponded to increased El Niño activity. This indicates that fire activity and deforestation were a product of the interaction between swidden agriculture and climate rather than land use alone.

Roos, Christopher [122] see Figueroa, Alejandro

Roos, Christopher [285] see Hollenback, Kacy

Rorabaugh, Adam (Simon Fraser University; Washington State Department of Fish and Wildlife)**[262]***Assessing Population Dynamics in the Central Salish Sea, Pacific Northwest Coast of North America*

Recent developments in radiocarbon dating have enabled archaeologists to reexamine the question of population dynamism in the Salish Sea. This study expands on prior studies using Kernel Density Estimation (KDE) and an expanded dataset of 538 radiocarbon dates from academic and cultural resource management literature. The expanded sample suggests a pattern of population growth from 3200 to 2800 cal BP in coastal northwestern Washington, with population growth in the San Juan islands during 2600–2200 cal BP. A subsequent decrease in radiocarbon frequencies and large sites suggests shifts in use of the San Juan Islands, followed by peak large-scale occupation from 650 to 300 cal BP. This pattern is robust whether marine or terrestrial dates are considered. However, marine dates are less sensitive to questions at smaller temporal scales. The broad scale radiocarbon frequency patterns observed are also consistent with those observed in southwest coastal British Columbia.

Rosa Figueroa, Jeffrey (California State University, Los Angeles)**[221]***Into the Darkness: Analyzing the Midnight Terror Cave Artifact Assemblage and its Spatial Implications*

From 2008 to 2010, California State University, Los Angeles, working under the Western Belize Regional Cave Project directed by Jaime Awe, investigated Midnight Terror Cave (MTC) in the Cayo District of Belize. At present, MTC is best known for its large human osteological assemblage of over 10,000 bones, which is well documented in the bioarchaeological literature. Less well known is that the survey also recovered a large number of artifacts that have received scant attention. This presentation analyzes the MTC collection within the larger context of our knowledge of Maya cave artifact assemblages to highlight its unique characteristics. Additionally, this research analyzes the spatial distribution of collection within the cave to draw conclusions about the use of artifacts and the function of space within caves.

Rosas Jiménez, Citlali**[273]***Teotihuacán: Retos actuales en la protección de su patrimonio arqueológico*

Desde hace varios años se desarrolla un estado de riesgo de pérdida parcial patrimonial en Teotihuacán. Si bien existe un marco normativo en materia de protección de patrimonio cultural arqueológico para Teotihuacán, este se encuentra desarraigado socialmente, derivado de acciones que muestran principalmente la falta de identidad, apreciación y reconocimiento de los valores culturales por parte de los actores corresponsables de su cuidado. Aunado a ello, la protección legal que sobrevive se enmarca en un estado de falta de mecanismos recientes de protección y/o de actualización de los existentes, elementos esenciales para fortalecer los esfuerzos nacionales de salvaguardia. Adicionalmente, el actor institucional encargado del cumplimiento de los lineamientos en materia de protección combate además un contexto regional de economía informal y de crecimiento urbano descontrolado. Situación que, dentro de los planes gubernamentales aspira a su regularización sin considerar la conservación y recuperación de la armonía patrimonial. Este análisis, producto de los resultados de registro de los procesos institucionales que se operan en Teotihuacán, evalúa el marco de protección considerando la dinámica cultural, política y social actual, de cuyo desenlace resulta exponer la necesidad de reestructurar el proceso de patrimonialización de Teotihuacán encaminado a una salvaguarda efectiva.

Roscoe, Paul (University of Maine)**[263]***Land, War, and Optimal Territorial Size in Neolithic Society: Why New Guineans Rarely Ever Occupied the Territories They Had Conquered*

Not infrequently, New Guinean warriors managed in war to displace or annihilate the members of a

neighboring territory, yet almost never did they then move in and occupy the territory they had won. Instead, they either left it vacant, allowed allies to take it over, or (most commonly) invited the original owners back a couple of years later. This seemingly irrational behavior directs attention to a largely overlooked aspect of neolithic territoriality—the optimal territorial size. In a theater of war, the territorial area that a neolithic polity can control is governed by a trade-off between its capacity to defend members as they move around that territory and the commuting costs incurred to procure the subsistence resources needed to support that defensive capacity. The end result is an optimal territorial size. Neolithic polities have an incentive to maintain this optimum, but should they expand beyond it—for example, by expanding onto a conquered territory—the result is an invidious reduction in defensive strength, a marked increase in subsistence commuting costs, or both.

Rose, Courtney (Pima County, Arizona, Cultural Resources & Historic Preservation Division)
[144]

Discussant

Rose, Nicole
[181]

Moderator

Rose, Shaun [206] see Egan, Rachel

Rose, Thomas (Deutsches Bergbau-Museum Bochum, Germany), Sabine Klein (Forschungsbereich Archäometallurgie, Leibniz-Forsc), Katrin Westner (Forschungsbereich Archäometallurgie, Leibniz-Forsc) and Yiu-Kang Hsu (Forschungsbereich Archäometallurgie, Leibniz-Forsc)

[121]

GlobalID: A New Research Data Infrastructure for Lead Isotope Data

Lead isotope data are an important tool for the reconstruction of raw material provenances of non-ferrous archaeological materials. The quality of the provenance reconstruction depends, among other factors, on the comprehensiveness of the reference data the archaeological samples can be compared with and access to these data. GlobalID aims to develop existing reference data collections, such as OXALID and IBERLID, by further building modern research data infrastructure in a community-driven process. GlobalID's main aims are to create (1) a standardized machine-readable description for lead isotope data from all kinds of objects, (2) an open-access database, (3) a web application providing tools to access the database and to do the most common tasks for working with lead isotope data, and (4) a workflow for the publication of lead isotope data as data publication and a collection of tools facilitating the submission of data and the maintenance of the infrastructure. Apart from building the infrastructure, GlobalID aims to bring the entire community closer together, particularly striving for better integration of colleagues from less wealthy countries. This will be achieved through the organization of training workshops, user meetings, and open educational resources.

Rosen, Arlene (University of Texas, Austin), Jennifer Farquhar (University of Pittsburgh), James Eighmey (Palomar College), Sarantuya Dalantai (Mongolian Ministry of Science and Culture) and Yadmaa Tserendagva (Mongolian Ministry of Science and Culture)

[23]

The Neolithic Bird Hunters of the Mongolian Gobi Desert

Archaeological surveys in the Gobi Desert of Mongolia have begun to reveal new information about the landscape distribution and seasonal movements of mobile populations in this semiarid steppe environment on the eve of the late Holocene adoption of pastoralism. However, until recently we've had little information

about their campsites and settlement activities due to the very small number of in situ archaeological remains. This made it difficult to understand the trajectories of subsistence pursuits and social organization preceding the shift to herding. The site of Burgasney Enger, located in the Ikh Nart Nature Reserve, Dornogovi Province, Mongolia, is unique in the region. Our recent excavations have revealed an organized settlement with hut circles, elaborately constructed ovens, plant phytoliths, and abundant bird bones indicating traditions of ecological knowledge at a “persistent place” adjacent to an extinct wetland environment. Semi-sedentary settlement there lasted from ca. 8000 to 4000 BP. The information from this site allows us to track adaptations to the increasingly dry environment and address the question of continuity and change in ecological traditions and knowledge.

Rosen, Arlene [20] see Blecha, Erika
Rosen, Arlene [130] see Farquhar, Jennifer

Rosen, Audrey [303] see Hutson, Scott

Rosencrance, Richard (University of Nevada, Reno), Geoffrey Smith (University of Nevada, Reno) and Christopher Jazwa (University of Nevada, Reno)

[138]

Toward Establishing a High-Resolution Chronological Record of the Atlatl-and-Dart to Bow-and-Arrow Transition in the Great Basin

The adoption of the bow and arrow by Indigenous peoples was a significant event that had profound social and economic effects. In the Great Basin, researchers have traditionally placed the appearance of the bow-and-arrow weapon system between ~1,800 and 1,500 calendar years ago and assumed that it almost immediately replaced the atlatl-and-dart system. Few efforts have been made to understand when, from where, and how quickly this shift took place. Direct AMS dating of organic weapon components from legacy collections offers a means of addressing these questions. Here, we report dozens of AMS dates on atlatls, darts, bows, and arrows from numerous Great Basin sites. Though much work remains to be done, our preliminary results do not support a rapid transition. Rather, they indicate that the atlatl-and-dart and bow-and-arrow systems were used alongside each other maybe as long as six centuries. As our dataset of directly dated weapon components continues to expand, it will contribute to ongoing conversations about when and why people favored one system over another, and the economic and social effects that such decisions carried with them.

Rosencrance, Richard [176] see Culleton, Brendan
Rosencrance, Richard [29] see Kallenbach, Elizabeth
Rosencrance, Richard [87] see McDonough, Katelyn
Rosencrance, Richard [337] see Saper, Shelby
Rosencrance, Richard [219] see Smith, Geoffrey

Rosenfeld, Silvana [27] see Contreras, Daniel
Rosenfeld, Silvana [27] see Sayre, Matthew

Rosenswig, Robert (University at Albany) and Keith Prufer (University of New Mexico)

[295]

Before There Were Ceramics in Belize

The 10,000 years before ceramics first appear is the longest epoch in the human occupation of Belize, and yet the least understood. Many fundamental cultural developments are first documented in what is now known as the Maya region, including management of tropical forest resources, a reduction in residential mobility, and increased reliance on food production. While relatively few data exist from the Preceramic Mesoamerica,

compared to the subsequent ceramic periods, a significant proportion has been unearthed from the within Belize. In this paper, we briefly summarize previous contributions made by archaeologists working in Belize before the appearance of ceramic containers at ~3000 BP. Early work by Richard MacNeish along with important results documented at Colha and Pulltrouser Swamp are reviewed for their contribution to understanding early occupations of Belize. This is followed by highlights from each author's current field research projects that are contributing new data to understanding the Preceramic. We conclude that archaeologists working within the small modern nation of Belize continue to make disproportionate contributions to understand the ancient Maya region and the larger Mesoamerican world.

Roske, Mycroft (University of Miami) and Pamela Geller (University of Miami)
[209]

Perspectives on Deviance: Exploring Sex-Variance from Bioarchaeological and Contemporary Standpoints

In this talk, we discuss the visible effects of sex-variance on skeletal material and in the modern politico-ethical world, drawing on bioarchaeological, historical, and medical sources. Here, sex-variance includes the overlapping categories of castrates (such as castrati and eunuchs), transgender people, and intersex people. Contemporary political partisanship and religious moralizing have produced “regimes of truth”—in keeping with this session's focus—that have worked to erase or denigrate such variance. Because the techniques and theories that bioarchaeologists and forensic anthropologists use to create knowledge are predicated on an assumption of a sex binary, overlooking “deviance”—a concept we will consider in greater depth—from that binary may be an understandable concession. However, drawing from queer theorizing, we argue that knowledge of such sex-variance in the past (1) eases the burden of invisibility individuals experience in the present and (2) combats the naturalization of a sex and gender binary. We also address the slippery slope—that is, the risk that discussing sex-variance can lead to the medicalization of gender-variance, reducing it to a medically determined and determinable biologically based condition rather than a complex interplay of personal, interpersonal, cultural, social, and biological factors.

Rospopo, Steven (New Mexico Highlands University; San Juan College Totah Archaeological Project)
[33]

Advances in the Understanding and Interpretation of Ceramic Offering Caches in Great Kiva Contexts

Recent investigations at the LA8619 Point Great House Community Great Kiva, have documented a ceramic offering cache of 600 artifacts. Two previous caches were documented in 2016 and 2021, also associated with the Southern cardinal direction in the Great Kiva. Drawing on ethnographic analogy evidence, an economies of destruction political economy theoretical basis, and site-wide novel ceramic analyses, an interpretation of the 2023 cache's ideological and cosmological function within Great Kiva monumental architecture in the ancestral Pueblo world is suggested. Analyses of the ceramic assemblage suggests that the cache is a directed deposition of animated objects that are capable of acting as agents of change. The 2023 offering cache is interpreted to be a closure or decommission event associated with a change in a late AD 1200s cultural tradition influence in the Middle San Juan region of the US Southwest.

Rossen, Jack (Chronicle Heritage)
[189]
Chair

Rossen, Jack (Chronicle Heritage)
[189]

Greathouse Springs, Arkansas: Structure and Social Organization of an Archaic Base Camp in the Ozarks

This paper discusses recent investigations at a hunter-gatherer base camp in northwest Arkansas. Excavations at the Greathouse Springs site (3WA569), near Fayetteville in Washington County produced unusual remains of Archaic structures. Included are two elongated rectangular structures, interpreted as communal

cookhouses, and at least four smaller circular structures, interpreted as sleeping huts. These were defined by their hardpacked earth and crushed stone floors and stone-lined posts. Other features are raised platforms with hearths and angled posts. Archaic base camps in the northwestern Arkansas Ozarks were regularly spaced at approximately 25-mile intervals, each with a surrounding cluster of satellite sites. Greathouse Springs provides some of the first detailed evidence of the internal structure and social organization of these base camps.

Rostain, Stéphen (National Center for Scientific Research, France) and Antoine Dorison (University of Paris-I)

[155]

Millennial Tropical Urbanism in the Upper Amazon

A dense system of prehispanic urban centers has been found in the Upano Valley of Amazonian Ecuador, in the eastern foothills of the Andes. Fieldwork and lidar analysis reveal a deeply anthropized landscape with complexes of monumental platforms; plazas and streets distributed according to a specific pattern; straight, wide roads running over great distances; and extensive agricultural drainages and terraces. Archaeological excavations reveal an occupation from around 500 BCE to 300/600 CE.

Roth, Barbara (UNLV)

[129]

Discussant

Roth, Barbara [103] see McCarthy, Andrew

Rothschild, Nan (Barnard College/Columbia University)

[142]

Discussant

[WITHDRAWN]

Rothwell, Jessica (Arizona State University), Hannah Liedl (Durham University), Paraskevi Tritsaroli (American School of Classical Studies at Athens) and Jane Buikstra (Arizona State University)

[241]

Investigating Childhood Metabolic Health during the Rise of the Athenian Democracy

Sociopolitical change, such as that which occurred during the Archaic period in Athens (700–480 BCE), has the potential to increase food scarcity and physiological stress. When dietary diversity is negatively affected, women and children are often the first to suffer the effects of insufficient micronutrient uptake. Thus, investigating metabolic disorders in archaeological populations is essential for understanding both a population's nutritional health and the etiology of early childhood stressors. This study investigates paleopathological indicators of metabolic stress in preadult individuals from Phaleron Cemetery ($n = 75$), ranging in age from birth to 15 years, to understand the potential impact of sociopolitical transition on nutritional insufficiency at Phaleron. In this sample, 81% had at least one indicator of physiological stress that could be related to nutritional deficiencies, and 36% had a suite of stress indicators consistent with scurvy, suggesting significant undernutrition among those who did not survive to adulthood. However, because scorbutic indicators may resemble markers of normal growth, other metabolic disorders, or nonspecific physiological stress, multiple etiologies and possible comorbidities are considered and evaluated. Furthermore, we argue that the presence of these indicators in individuals who would have been breastfeeding may indicate maternal nutritional stress.

Rothwell, Jessica [241] see Stamer, Julianne

Rots, Veerle (TraceoLab, University of Liège) and Justin Coppe (TraceoLab, University of Liège)**[306]***Functional Perspective on the Evolution of Hunting Technology in Africa and Europe*

The development of hunting technology is a key aspect of human behavioral evolution. Many efforts have therefore been made to identify prehistoric projectiles and propulsion modes, especially to determine when long-range hunting weapons were first invented. The African record has been central to such debates thanks to the early dates for stone projectiles and claims made for the first appearance of bow-and-arrow technology in South Africa. Research into the origins of projectile technology suffers, however, from two major setbacks. First, no reliable method exists for identifying propulsion modes, and the present claims therefore largely rely on circumstantial evidence. Second, functional studies have been infrequent, and projectile function has instead been assumed on typological or morphological grounds, Tip Cross-sectional area (TCSA) values being a case in point. Analyses incorporating so-called diagnostic impact fractures have provided more specific data but have sometimes also added confusion. In this paper, we review current projectile evidence for the Middle Stone Age in Africa and the Paleolithic period in Europe and based on our recent experimental and methodological work we propose some avenues that hold promise for future research.

Rots, Veerle [58] see Tydgadt, Lola

Rowan, Yorke (University of Chicago), Gary Rollefson (Whitman College), Alexander Wasse (Yeditepe University), Chad Hill (University of Pennsylvania) and Morag Kersel (DePaul University)**[139]***The Late Neolithic Expansion in the Black Desert, Jordan*

Spanning the early–mid-Holocene and the global climate event at 8200 BP (“8.2 event”), the Late Neolithic (ca. 7000–5000 BCE) is a crucial time for understanding cultural trajectories in southwest Asia. In hyperarid deserts such as that in the Black Desert of eastern Jordan, questions remain about the environmental background and its impact on the behavior of communities. Research over the past decade by the Eastern Badia Archaeological Project has recorded substantial Late Neolithic occupation sites in the eastern desert of Jordan. Although evidence from the Arabian Peninsula and Sahara demonstrated permanent lakes and associated vegetation at this time, until now little evidence was available to place eastern Jordan into this regional perspective. This paper will present evidence from the Black Desert sites of Wisad Pools and Wadi al-Qattafi that suggests that this was a steppic zone crossed by people reliant on caprine herding and intensified hunting. These Neolithic people had contacts outside what we now view as this marginal zone and had increased social and economic interaction beyond the steppic region.

Rowe, Sarah (University of Texas Rio Grande Valley) and Guy Duke (University of Texas Rio Grande Valley)**[161]***Expanding the Archive: Buen Suceso and the Valdivia Tradition in Early Andean Interaction*

The Valdivia tradition of coastal Ecuador (ca. 3800–1450 BC) was one of the first sedentary, agricultural, and ceramic-producing traditions of the Americas. Valdivia holds an important place in regional (coastal) and national imaginings about the origins of Ecuadorian cultures and the Ecuadorian nation. While the modern border between Peru and Ecuador generally serves to silo the cultural traditions on either side of it, connections between Valdivia and traditions in Peru have long been noted, from the pyro-engraved gourd featuring Valdivia iconography found by Junius Bird at Huaca Prieta to similarities in the ceramic assemblages found in El Oro Province and far northern Peru identified by John Staller. Recently identified connections between the Valdivia occupation of the coast and the Mayo-Chinchipe- Marañón tradition of southern Ecuador and northern Peru suggest that further attention to the variety contained within the Valdivia tradition is warranted. We present insights from ongoing research at Buen Suceso (ca. 3750–1425 BC), a

Valdivia site located in the Culebra-Colin (Manglaralto) Valley on the flanks of the Colonche-Chongón hills. Buen Suceso is one of the longest-occupied Valdivia sites and exhibits a unique history and social practices that expand the basis for comparisons of social traditions in Ecuador and Peru.

Rowe, Sarah (University of Texas Rio Grande Valley)
[238]

Discussant

Rowe, Sarah [285] see Duncan, Savannah
 Rowe, Sarah [197] see Ramirez, Benjamin

Rowell, Abigail [230] see Woodfill, Brent

Rubertone, Patricia (Brown University)
[311]

Urban Renewal, Historical Preservation, and the Erasure of Indigenous Modernity

Indigenous people's urban experiences represent some of latest chapters in their stories of survivance. Yet they remain largely invisible archaeologically because of urban renewal, historic preservation practices, and the myth that US cities do not have modern Indigenous histories. Geographies of race and class underwriting mid-twentieth-century urban renewal and earlier land clearance made the Indigenous inhabitants of Providence its unseen victims. A modest-size city in the Northeast, Providence had the third-largest Native American population in the United States by the first decade of the twentieth century. Structural debris from their homes that city planners considered blighted and often their contents, along with archaeological traces of deeper histories were removed and redeposited, erasing and compromising the Indigenous urban landscape. Historic preservation law designed to address the destruction caused by urban renewal underserve Indigenous communities due to reliance on thematic frameworks that deny that Indigenous people can be modern and urban. Moving forward, urban heritage must be more inclusive and collaborative, and the eligibility criteria for preservation must recognize sites of Indigenous occupation routinely considered lacking aesthetic value or sufficient integrity.

Rubinatto Serrano, Juliana (University of Florida)
[99]

People-as-Animal Comparisons and the Indigenous Experience of Spanish Colonialism in the Andes

Animal metaphors can express conceptualizations of humanity and attitudes about society when referring to groups of people. In Spanish colonial contexts in the Americas, these metaphors often reinforced social hierarchies and denigrated indigenous peoples. Although few, there are first-hand accounts of Indigenous authors subverting these discourses to their advantage. By examining their use of animal metaphors, we can center Indigenous agency in our historical interpretations of the complex processes of colonization. In this project, I explore how the Andean Indigenous author, Felipe Guaman Poma de Ayala, used animal metaphors in his 1615–1616 manuscript through conceptual metaphor theory and social semiotics. Guaman Poma weaved his colonial context into people-as-animal comparisons displaying aspects of human-animal and Spaniard-Indigenous interactions during the first century of Spanish colonization. I also present how similar uses of these comparisons by present-day Indigenous people reveal aspects of the colonial legacy and how investigating the historical origin of these metaphors can improve our understanding of the sociopolitical positions of Indigenous peoples today. This project shows the potential for combining ethnohistorical and ethnographic research with zooarchaeological evidence to reconstruct the Indigenous and animal experience of colonialization and its legacy.

Rubinson, Samantha (Southern Nevada Rep.)**[64]***Discussant***Rubinson, Samantha (Southern Nevada Rep.) and Sarah Miller (Florida Public Archaeology Network Northeast)****[254]***Outcomes of Site Stewardship: Exploring the Vast Archives of Site Preservation*

Data collected through site stewardship programs are unique and provide insights into the long-term preservation of archaeological sites. Stewardship programs across the country are working with communities to document changes over time from environmental and human-driven causes. Site changes are recorded using photography, monitoring reports, mapping, 3D scanning, and site condition assessments. This paper will explore previous, current, and potential research projects using datasets from site stewardship programs. These projects span from the effect of climate change on sites, working with descendant communities to help develop new practices in preservation, tracking the degradation of sites throughout the country and the importance of digital photography recordation as a significant form of preservation.

Rubinson, Samantha [103] see McCarthy, Andrew

Rubio, Alison [270] see Jankiewicz, Stephen

Rubio-Cisneros, Nadia (Mar Sustentable Ciencia y Conservación), Ilse Martínez-Candelas (University of Victoria), Diana Ordaz-García (Universidad Nacional Autónoma de México), Nayeli Jiménez Cano (Muséum National d'Histoire Naturelle, Paris) and Jeffrey Glover (Georgia State University)**[259]***Interdisciplinary Science and Fishers' Local Ecological Knowledge of Sawfishes in the Yucatán Peninsula*

Knowledge of sawfishes is still scant for Latin America. *Pristis pristis* (largetooth sawfish) and *Pristis pectinata* (smalltooth sawfish) are critically endangered. In the Yucatán Peninsula (YP) these species populated coastal landscapes. We collected 290 surveys of fishers' Local Ecological Knowledge (LEK) with a geospatial component and reviewed 74 literature sources and available archaeological data for the region. Results show the common past presence of sawfishes, their cultural significance for coastal societies, the contemporary absence of sawfishes in coastal areas where they historically existed, sightings of juveniles were only documented by elder fishers, and only two recent narratives mention sawfishes caught incidentally five years ago. Geospatial results prove 52 geographic sites where sawfishes were common in the YP. Results support the development of interdisciplinary research methodologies to study human-nature interactions through time. This matters in the YP, where sociocultural values and landscapes have changed rapidly by increasing tourism development and human migration. This information can help conservation managers understand the past presence and contemporary loss of sawfishes and their habitat and contribute to understanding defaunation of megafauna in the YP. This is critical for tourism and fisheries' ecosystem services on which communities of the YP rely for subsistence.

Rucinski, Hannah (Illinois State Archaeological Survey), Georgia Abrams (Illinois State Archaeological Survey) and Tamira Brennan (Illinois State Archaeological Survey)**[137]***Moving a Monster, Part One: Preserving Illinois' Cultural History in Perpetuity*

In 2022, the Illinois State Archaeological Survey's Curation Section undertook the monumental task of moving its ~24,000 ft³ Illinois Department of Transportation collections to a larger, modified-to-suit facility. These collections include some of the most significant projects carried out in Illinois. This paper addresses our methods for assessing the state of collections and the considerations, logistics, and challenges of

identifying immediate needs to accomplish this task efficiently. Preparations included, but were not limited to, box-level assessments; location control; environmental monitoring across four buildings; identifying an appropriate new facility and upgrading that space with HVAC, fire protection, an alarm system, and high-density shelving units; hiring movers; and physically preparing the collections for moving day. The insights gained in this endeavor illustrate the complexity of moving large collections to better equip other institutions with methods to improve their own collections management plans.

Rucinski, Hannah [137] see Abrams, Georgia

Rucinski, Hannah [305] see Brennan, Tamira

Ruf, Kim Eileen (University of Cambridge; Harvard University)

[118]

Chair

Ruf, Kim Eileen (University of Cambridge; Harvard University) and Marie Kolbenstetter (Universiteit Leiden)

[118]

Tracing Tides of Change: Perspectives on Mobility and Materiality in Precolonial Central America

Matters of materiality and mobility across Central America have long been the subject of archaeological investigation concerning its precolonial past. In outlining the spectrum of material movements and their broader sociocultural implications beyond traditional archaeological narratives, this introductory paper seeks to explore the interplay between foreign influences and local integrations of material culture in the Isthmo-Colombian Area. As a precursor to the broader symposium discussions, this paper intends to frame a robust academic exploration of mobility and materiality across and within precolonial Central America, prompting scholars to reconsider its dynamics through the lens of material flows and their transformative impacts on its societies. We particularly want to move beyond some of the more prevailing narratives, including the impact of predominantly external influences on the sociopolitical development of the region. In doing so, we aim to paint a more holistic picture of the mechanisms and dynamics of material trajectories and their effects on matters of migration, filiation, and (social) identity.

Ruiz, Judith (Instituto de Investigaciones Antropológicas UNAM), Viridiana Guzmán Torres (UNAM) and Emiliano Melgar Tísoc (Museo del Templo Mayor, INAH)

[79]

Traceología: Identificación de instrumentos sacrificatorios y de manipulación póstuma en el Osario 15 de Toniná

El sacrificio humano por medio del acceso de toracotomía bilateral transversa es una práctica ritual poco documentada a nivel osteológico en el área maya. En el presente trabajo se muestra a nivel microscópico y macroscópico tal evidencia, así como el tratamiento que se les dio a las víctimas posterior al sacrificio. El estudio se llevó a cabo en Toniná, donde se rescataron más de 15 mil huesos humanos con evidencia antrópica, recuperados de la Acrópolis. Se parte de la observación morfooscópica por región anatómica y posteriormente se realizó una selección de una muestra representativa por área anatómica del cuerpo: cráneo, caja torácica, extremidades superiores e inferiores y huesos de las manos y pies. Consecutivamente se revisó a nivel microscópico cada alteración ósea seleccionada, para proseguir con la identificación de herramientas líticas mediante una impronta con polímero replicante para su identificación en el Microscopio Electrónico de Barrido (SEM) y por medio de la arqueología experimental. Este análisis nos aporta datos sobre el tratamiento mortuario y las prácticas tecnológicas referentes a la manipulación póstuma de los cuerpos sacrificados. La finalidad es presentar la evidencia ósea, así como la identificación de las herramientas líticas utilizadas en el manejo de las víctimas.

Ruiz Albarrán, Perla del Carmen [47] see Contreras-Sieck, Miguel

Ruiz Giralte, Abel [288] see D'Agostini, Francesca

Ruiz Perez, Javier [288] see D'Agostini, Francesca

Runggaldier, Astrid (University of Texas, Austin)
[276]
Chair

Runggaldier, Astrid (University of Texas, Austin)
[276]

Reduce, Reuse, Recycle: Small Finds in the Collections of Maya Archaeological Assemblages of the BREA Project in Belize

This presentation addresses data from the Maya “small finds” category in the laboratory assemblage of collected and excavated materials of the Belize River East Archaeology (BREA) Project, which beginning in 2011 has been documenting and researching the cultural and environmental history of the Belize River drainage, comprising Preceramic period land and resource use, Maya settlements and landscapes, Spanish and British colonial contexts, and the Kriol heritage of current communities. Here I focus on material culture studies broadly, and object biographies more specifically, inspecting a range of categories of Maya material production. Among these are objects that have variously been referred to as fishing net weights or net sinkers, as well as objects described in the literature as perforated disks or interpreted as spindle whorls and weft weights. Using insights from ceramic ethnoarchaeology studies, this presentation examines ceramic small finds recycled from pottery sherds within a framework of depositional theory, use-lives of objects, and ceramic reuse behavior. The analysis of processes like discard and recycling within the context of pottery making, fishing technologies, and weaving explores the links between material culture and social practice, with the goal of providing insightful queries into Maya ceramic production and economic specialization.

Rushing, Brett [269] see Harvey, Amanda

Russell, Bradley [32] see Masson, Marilyn

Russell, Dylan [99] see Levy, Jay

Russell, Glenn (County of Santa Barbara)
[146]
Discussant

Russell, Nerissa (Cornell University)
[85]
Risky Research

Sebastian Payne made a lasting impact on zooarchaeology, especially in the Old World, with his 1973 paper outlining age and sex mortality profiles that characterize the prioritization of meat, milk, or wool. Richard Redding was the first scholar not only to suggest that these optimizing models might not be appropriate for ancient societies but to provide a rigorous alternative model that foregrounded another factor: risk reduction, or security. This was an important intervention, one that started me thinking about other factors that prehistoric herders might have considered as they made culling decisions, such as wealth value. Redding made many contributions to zooarchaeology; I would argue that this is the earliest major one and one of the

most enduring.

Rutkoski, Ashley, Nicolas Gauthier (University of Florida), Neill Wallis (Florida Museum of Natural History), Andrea Torvinen (University of Florida) and Ann Cordell (University of Florida)

[287]

Enhancing Ceramic Petrography through Deep Learning

Clay recipes reveal information about the local geology and the inclusion of different additives that make up a vessel, which in turn reflects the social, environmental, and technological context of ceramic manufacture. Ceramic petrography has long been instrumental in shedding light on key manufacturing techniques, identifying unique mineralogical signatures, and assessing patterns of cultural exchange among diverse communities. However, traditional methods used to characterize and quantify petrographic thin sections can be labor-intensive and time-consuming, making it difficult to meet the increasing demand for large comparative datasets. Here, we present recently developed machine-learning algorithms to enhance the efficiency, accuracy, and accessibility of these intricate analyses. We review the basic steps for conducting these approaches and illustrate their practical application for being incorporated into a petrographer's standard toolkit. Streamlining petrographic workflows through machine-learning techniques will open new avenues for the quantitative and qualitative assessment of ceramic technology and its broader implications for past societies.

Rutkoski, Ashley [279] see Nelson, Erin

Ruuska, Alex (Westland Resources)

[156]

When the Earth Was New: Memory, Materiality, and the Numic Ritual Life Cycle

This paper explores the critical subject of indigenous oral traditions in California and the Great Basin. Using an interdisciplinary approach that considers Numic oral teachings relative to place-based data in ethnography, ethnohistory, archaeology, and geology, the author interrogates traditional narratives encoding some of the earliest forms of scientific observation among Numic speaking communities. This research explores multigenerational memories of recorded localized geological knowledge within oral teachings. These teachings, expressed in the form of narratives, songs, rock art, and material culture, provide opportunities to explore memory, ritual, materiality, and potential convergences between science and indigenous ways of knowing.

Ruvalcaba-Sil, José Luis [240] see López Puértolas, Carlos

Ryan, Karen (Canadian Museum of History)

[168]

Dorset through Their Own Eyes

The Dorset Paleoinuit (Tuniit in Inuit traditional knowledge) are a culturally extinct group who lived throughout much of the eastern North American Arctic between about 2,500 and 700 years ago. They are best known for their art, primarily 2D and 3D carvings, which range from highly naturalistic to highly abstract. Ubiquitous among the carvings are representations of human and near-human faces with a variety of expressions suggesting emotions including surprise or alarm, sadness, joy, peace, and anger. The faces appear on a variety of handheld objects extending from the utilitarian (harpoon heads) to the esoteric ("wands"), as well as at three petroglyph sites. Researchers have offered a variety of interpretations for why the faces were made, usually linking them with shamanistic practices including human-animal transformations and ancestor reverence. However, there is sufficient variation between faces to indicate that a large range of individuals, likely real people, were being depicted. At the same time, certain faces appear to repeat again and again,

across time and space, suggesting specific stories or individuals were being referenced as cultural touchstones. Using collections at the Canadian Museum of History, this presentation investigates the variability and possible meanings underlying Dorset representations of themselves.

Ryan, Susan (Crow Canyon Archaeological Center)

[149]

Human-Environment Research at the Crow Canyon Archaeological Center: The Legacy of Dr. Karen R. Adams
Initiated by Dr. William Lipe and Ian (Sandy) Thompson in the late 1980s, the goals of the Environmental Archaeology Program at the Crow Canyon Archaeological Center are to study the effects of human occupations on the natural environment, how people socially mediate environmental change, and to contribute to discussions of how past behaviors can inform environmental education, policy, and practices in the present and future. Dr. Karen R. Adams's decades-long career plays a significant role in our understanding of human and environmental interactions in the central Mesa Verde region from AD 500 to 1300. This paper summarizes Dr. Adams' contributions to archaeobotanical and paleoethnobotanical research in the northern Southwest and celebrates her substantial legacy.

Ryan, Susan [199] see Dombrosky, Jonathan

Ryan, Susan [200] see Nagaoka, Lisa

Ryan, Susan [249] see Wolverton, Steve

Rybka, Ryan (University of Massachusetts Amherst)

[254]

A Pipeline Project: Navigating through Diverse Perspectives Surrounding the Line 3 Replacement Pipeline
Enbridge's crude oil Line 3 Replacement Pipeline cuts through 337 miles of Ojibwe Treaty lands in Northern Minnesota and has been in operation since October 2021. It is the most recent installment of a historic petroleum infrastructure tradition in the state of Minnesota that extends back over 70 years. Oil pipelines do not only enter the purview of archaeological attention due to their capacity to harm buried archaeological material along their route but also as contemporary archaeological features that have direct implications for the many communities with whom they come in contact. This contemporary infrastructure, like all its historic developments, is not only a matter of immediate concern but also serves as an example of the continued presence of materiality that violates Indigenous sovereignty that likewise requires archaeological attention. In this paper, I discuss the challenges of obtaining narratives and engaging with a variety of stakeholding community members, such as Water Protectors, law enforcement agents, and archaeologists. My research demonstrates the importance of including diverse perspectives that each emphasize varying understandings of environmental, material, and social impacts of the Line 3 replacement pipeline and presents a unique and holistic approach currently missing in the archaeological literature.

Ryden, Ron [202] see Chenault, Mark

Ryzewski, Krysta (Wayne State University), Tareq Ramadan (Wayne State University) and Aaron Sims (Project We Hope, Dream, Believe)

[254]

Collaborative Archaeology and Heritage Management at the Malcolm X House, Inkster, Michigan

This presentation reflects on the process and contributions of collaborative archaeology involved in the Malcolm X House Project in Inkster, Michigan. The 800-square-foot home was where Malcolm Little was living in 1952 when he assumed leadership roles in the Nation of Islam, changed his name to Malcolm X, and rose to international prominence as a civil rights leader. In 2020 the Inkster-based nonprofit Project We Hope, Dream, Believe partnered with local archaeologists and historic preservationists to secure funds to purchase and restore the derelict house into a museum and community center commemorating Malcolm X's

legacy. Archaeological investigations were deemed by the nonprofit to be an integral component of the project. We detail how collaborations between the nonprofit, local residents, and archaeologists succeeded in navigating historic preservation and fundraising efforts and empowered an underrepresented community to establish leadership roles in the preservation of civil rights heritage sites locally and statewide.

Saari, Laura Maria (University of Helsinki)

[191]

Tidemarks, Waterlines, and Shifting Sands: Perspectives on Aquatic Landscapes in the Plata Basin

Characterized by hydrological variation and shifting shorelines, rivers, wetlands, and coastal areas of the Plata Basin have historically formed interactive cultural landscapes, dynamic resource and communications geographies, and globally vital ecosystems. Using fluctuating contact zones with water as a theoretical and methodological point of departure, the paper outlines considerations for multidisciplinary approaches to their reconstruction. This is anchored in a diachronic discussion on circulation, exchange, and praxis of waterside communities, centering on the Goya-Malabrigo Archaeological Entity and the Guaraní, the “Phoenicians of the Precolumbian world” (Métraux 1928: 207), also with reference to their maritime extension. Due to the dynamic interplay of natural and anthropic factors, the archaeological record of the islands, beaches, and promontories that formed loci of aquatic lifeways is often fragmentary. In terms of landscape reconstruction, this accentuates the importance of further research on periodically and partially submerged zones, past and present; infrastructures and implements related to aquatic resource exploitation; navigation adapted to specific conditions; and the analysis of bioindicators from aquatic and shoreline environments. Together, these inform questions of scale in historical ecology and the regional archaeology of waterways, also indicating avenues for the study and mitigation of climate change effects.

Sabo, Allison (University of Miami), Daniel Koski-Karell (National Institute of Archaeology, Washington, DC) and William Pestle (University of Miami)

[127]

Acknowledging Behavior and Process in Early Caribbean Stone Tools: The Case of the Ortiz Site, Cabo Rojo, Puerto Rico

Since the 1930s, scholars have examined variation in early lithic assemblages across the Caribbean archipelago. Long-held explanations for the genesis of these assemblages (and the differences among them) include cultural/stylistic factors, aspects of raw material availability/quality, or the intended type(s) of activities of specific tool types or industries. Lamentably, such attempts have often served to relegate lithic toolkits to being mere deterministic responses to external stimuli. Analysis of the lithic assemblage from the Ortiz site, an early (2340 cal BC–cal AD 310) habitation site in Cabo Rojo, Puerto Rico, examines the sustained and contemporary manufacture of both blade and expedient flake technologies. We present here the results of morphological, experimental, and use-wear analyses which sought to gain a more comprehensive understanding of the decisions ancient stone tool makers and users made as they undertook processes of lithic procurement, reduction, and use. Using Ortiz as a case study, our hope is to (re)situate the behaviors and processes of lithic procurement and manufacture in the early Caribbean within the hands of ancient knappers whose assemblages were, above all, products of conscious choices, and far more complex than caricatures of their purportedly “simple” hunter-gatherer way of life.

Sachse, Frauke (Dumbarton Oaks)

[90]

Chair

Sachse, Frauke (Dumbarton Oaks) and Daniel Boomhower (Dumbarton Oaks)

[90]

History and Future of the Kerr Photographic Archive of Maya Ceramics

The Kerr Archive constitutes the largest photographic collection of Maya ceramics, including rollouts and

stills of more than 5,000 unique artifacts from museums, private collections, and archaeological excavations. Devising their own numbering system, Justin and Barbara Kerr created more than just an archive. “Kerr numbers” have become persistent identifiers for Maya ceramics and are today more widely used in the scholarly literature than the designations and collection numbers of the actual repositories. This paper will revisit the history of Justin and Barbara Kerr’s contribution and how the Kerr Archive became the framework for organizing our knowledge of Ancient Maya ceramics. We will provide an update on the work currently done at Dumbarton Oaks to preserve the data from the Maya Vases Book and Mayavase.com, while re-cataloguing the collection in HOLLIS Images and making the images searchable through the Dumbarton Oaks website. We will discuss implications from the Kerrs’ work for future generations of scholars and pose relevant questions to which the papers in this session will respond.

Sáenz Samper, Juanita [118] see Vieri, Jasmine

Safari, Noah (South Carolina Institute of Archaeology and Anthropology)

[72]

NAGPRA Data Management Plan

It has been over three decades since the Native American Graves Protection and Repatriation Act (NAGPRA) was signed into law on November 16, 1990. NAGPRA was passed in a different information environment than the one at present; electronic documents are now ubiquitous and legislative mandates require a transition from paper documents to digital formats. With this new climate comes new challenges to preserving the integrity of documentation both for security and in respect to stakeholder communities. A particularly relevant subject area is the issue of redaction, which requires an adaptive approach when decolonizing legacy collections. A new path must be forged to develop a model of best practices, to ensure the integrity of the information gathered, and communicate among various entities to ensure that the spirit of the legislation is upheld. As part of a NAGPRA repatriation project, I developed a data management plan to comply with legal requirements and worked to devise a redaction policy, with the specific aims to consider the unique challenges posed with electronic storage and the conversion from older formats. It is hoped that this work will promote a reconsideration of information policies that ensure the utmost effort to secure sensitive information.

Sain, Douglas (Terracon)

[253]

From Colonization to Complexity and Beyond: David G. Anderson and Big Picture Archaeology in North America

David G. Anderson’s contributions to the field of archaeology are beyond measure, both in number, scope, and significance. These include substantive contributions to Southeast prehistory, from the peopling of the Americas to the historic period, and from academia to the field of cultural resource management (CRM). David has also had an impact on numerous individuals, via publication, mentorship, and education. In this presentation, I will highlight a number of the ways that David has been an inspiration and enduring influence on my own life and career as an archaeologist in the US Southeast. In particular, I will discuss a sample of his own work and how it has guided my own research in the field of archaeology over the past two decades.

Saintenoy, Thibault (Instituto de Ciencias del Patrimonio [CSIC]), Marcos Llobera (University of Washington), Cesar González-García (Instituto de Ciencias del Patrimonio [CSIC]) and Cristian González (University College London)

[28]

How to Characterize in visu Mountains’ Shape and Its Significance in Inca Culture?

Beyond geomorphology, mountains are complex cultural entities. In Inca culture, they embodied powerful social agents, *wak’as*, and constituted meaningful places in the territories that composed the empire. Early colonial chronicles, as well as ethnological heritages, offer abundant data and analogies on mountains’ cultural

significance, but archaeological evidence is scarcer. It mainly consists of *capacochas* sacrifice remains on very high-altitude summits, of rare examples of miniature representation, and of the architectural devices of mountains scenification (e.g., a window and/or the site location) and their common association to astronomical phenomena. Researching how mountains appear from these devices can allow us to assess if certain summits' characteristics were especially significant in Inca culture, as stated in some chronicles. This talk will present a 3D modeling approach to characterize and statistically compare summits' in visu appearance and relation with astronomical events. This approach, based on horizontal visualization and measurement of a digital terrain model, is applied to the study of Vilcabamba Cordillera, a mountain range close to Cuzco, whose impressive density of snow-capped peaks may have played a significant role in the selection of this region for the implantation of royal estates instead of its planning as a classical imperial province.

Saintenoy, Thibault [171] see Birge, Adam

Saintenoy, Thibault [185] see Gonzalez Rodriguez, Cristian

Sakaguchi, Takashi

[315]

Archaeological Study of Sources of Slate Stone Clubs from the Late to Final Jomon of Central Hokkaido

Slate stone clubs created as prestige technologies were frequently found in *shuteibo* (a type of communal cemetery characterized by a circular embankments constructed in the latter half of the Late Jomon of central Hokkaido) burials suggesting that they were regalia of the dead. This paper explores sources of the stone clubs to better understanding trade networks of these artifacts and the Late Jomon political economy. To do so, (1) this research conducted reconnaissance of stone raw materials in the southern Kitagami Plateau in the Tohoku region, which is well known for its fine slates; and (2) examine techniques of the stone club production processes at production sites in the Plateau. Similarities of raw materials and techniques used for slate stone clubs between the Plateau and central Hokkaido suggest that many of these stone clubs were imported from the Plateau via long-distance trades as part of prestige economy. Such trade goods could be used to enhance and reinforce the status of elites as part of an aggrandizer strategy. Trade involving these stone clubs among elites associated with rituals and feasts probably accelerated a high degree of interaction between regional groups in Tohoku and central Hokkaido.

Sakai, Sachiko (California State University, Long Beach) and Steven Wong (California State University, Long Beach)

[103]

Reconstruction of the Site History of the "Zip Code Site," a Large Virgin Branch Puebloan Site at the Mt. Trumbull Area in the Arizona Strip

The goal of this study is to gain a better understanding of the settlement patterns among the Virgin Branch Puebloans, who were small-scale farmers living in the marginal environment at the Mt. Trumbull area in the Arizona Strip. The Zip Code Site (131BLM) is a large site with multiple pueblo structures at least 200 m long. One of the hypotheses for this large site is that it was a late aggregated village. Previous studies, however, mention the very few corrugated sherds, thus implying that this site was occupied relatively early during the late Basketmaker III or Pueblo I period. Both the radiocarbon dates and the optically stimulated luminescence (OSL) dates range from AD 476 to 1350. Thus, it is hypothesized that, instead of being an aggregated village, this large site is the result of long-term occupation and not all of the structures and rooms were used simultaneously. Between 2018 and 2023, several rooms were excavated to better understand the history of the site's use. In this poster, we will present the results of the chemical compositional analyses of the soils using pXRF from different depths in a few rooms, combined with OSL dates, to investigate the history of site's occupation.

Salas, Megan (Denver Museum of Nature & Science)**[13]***Objects Conservation and Materials Analysis at Pañamarca*

In addition to the painted architectural surfaces recently unearthed at Pañamarca, a wide array of objects have been found in recent excavations. The objects found at Pañamarca demonstrate that the site has an excellent preservation environment. This paper will present conservation approaches to some of the different types of objects—such as metals, organic materials, and ceramics—encountered in the 2023 season. The presentation will highlight the importance of preventive conservation efforts like packaging in ensuring the survival of these materials post-excavation. The successful block lift of a large artifact will be presented as a model for further work at the site. This paper will also present preliminary analytical findings on pigments from the wall paintings. Pigments were analyzed in situ with a handheld X-ray fluorescence spectrometer and samples were taken for further laboratory analysis.

Salas, Megan [13] see Sánchez, Blanca

Salazar Chávez, Victor Emmanuel (George Washington University) and Jeffrey Blomster (George Washington University)**[128]***De quelites me como un taco: The Importance of Secondary-Growth Plants in Polyculture-Based Farming Strategies and Food Traditions at Etlatongo, Oaxaca*

Whenever we think of Mesoamerican foods, it is easy to imagine maize. It is particularly true during the Early Formative period, when the first sedentary villages appear in the region. Maize has been used almost exclusively to explain and understand early Mesoamerican diet and subsistence. This has left out a more comprehensive understanding of people's foodways. In Etlatongo, an Early Formative community in the Mixteca Alta of Oaxaca, the largest macrobotanical sampling for the period has been examined, and it provides both essential and new information about people's foods beyond maize-centered views. Several types of plants, such as edible weeds, shrubs, and cacti, were identified. The evidence suggests that they were crucial to the community's food traditions, as well as to the development of polyculture-based agroecological systems. These largely undervalued plant species for archaeologists were rather key to social and cultural development at Etlatongo, and their study offers more nuanced ways to understand one of Mesoamerica's most significant episodes, the emergence of sedentary and sociopolitical complex societies.

Salazar Lama, Daniel [32] see Tsukamoto, Kenichiro

Saldaña, Gabriela (Independent Researcher) and Elizabeth Graham (University College London)**[226]***Revisiting the Polychromatic Stucco of Lamanai, Belize*

A significant assemblage of Late to Terminal Classic stucco was discovered at the archaeological site of Lamanai in northern Belize. Originally forming a frieze adorning the upper facade of the palatial Structure N10-28, the stucco fragments are remarkable for their overall preservation and their extensive polychromatic pigmentation. In 2023 a new phase of documentation was initiated, following up on earlier efforts undertaken between 1998 and 2000. This ongoing study aims to explore the potential of photogrammetry for cultural heritage management purposes, and for reconstructing the original pictorial registers of the frieze in a 3D environment. The study focused in particular on (1) photographic and photogrammetric documentation of selected pieces, (2) chromatic documentation and determination of color values of the pigments, and (3) iconographic and epigraphic analyses of the figurative and glyphic stucco. The preliminary analyses of the iconographic frieze reveal sections of a highly detailed narrative scene, which furthers our understanding of ancient Maya pictorial expressions at Lamanai.

Saldana, Melanie (California State University, Los Angeles), Michele Bleuze (California State University, Los Angeles) and James Brady (California State University, Los Angeles)
[285]

New Observations on Ancient Maya Ceramic/Textile Composites: A Technological, Conceptual, and Contextual Reappraisal

In 1993, a previously unknown composite material made of layers of finely woven cotton fabric saturated in ceramic slip were recovered by the Petexbatun Regional Cave Survey in the Cueva del los Quetzales, Petén, Guatemala. An analysis of the sherds was conducted by the Smithsonian Institution's Conservation Analytical Laboratory (now the Smithsonian Center for Materials Research and Education [SCMRE]) in 2004. A recent revisiting of the materials included micro-CT scan imaging that has led the authors to question the established position that the technology used to produce these sherds was highly specialized, and that they were made exclusively for the elite. This presentation chronicles our reanalysis and rethinking of these rare artifacts.

Salerno, Ross [87] see Jacobs, Nicholas

Sall, Candace (University of Missouri Museum of Anthropology and American Archaeology Division)

[73]

Changing Curation Practices When Indigenous Voices Are Included

Curation practices changed at museums as human remains and funerary objects went from being seen by practitioners as scientific specimen to individuals. When this happens, how the individuals are handled and cared for changes as well. Consulting with Tribal Nations about the care of individuals allows culturally appropriate methods to be developed and put in place. Our consultations have led to the writing and regular updating of our "Traditional Care & Handling Guidelines" at the Museum of Anthropology, University of Missouri. Along with changes in care of individuals, the museum has made changes in the care of other artifacts as well. And consultations have led to more complete stories being told in the museum as the museum and Tribal Nations work together.

Sall, Candace [42] see Koonce, Jacob

Sall, Candace [41] see Qais, Deepro Sanjid

Sallum, Marianne (University of São Paulo; University of Massachusetts, Boston; University of Lisbon)

[134]

Chair

Sallum, Marianne (University of São Paulo; University of Massachusetts, Boston; University of Lisbon) and Julieta Flores-Muñoz (Instituto Politécnico Nacional)

[134]

Daily Life Rhythms: Narrating Milpa Landscapes in Mexican Mountains and Sustaining Agroforestry Practices in Brazil

This paper highlights the importance of agroforestry communities in Latin America as guardians of ancestral knowledge related to plant cultivation and ecological practices that have shaped the region's landscape and cultural heritage. These communities celebrate the interconnectedness between people and the environment, resulting in a chain of social practices that permeate their daily lives. This paper explores the transmission of this knowledge and the articulation between ancient and new techniques in traditional communities in Mexico and Brazil. Over generations, these communities have integrated food into complex and sustainable ecosystems, as exemplified by maize production in Baxtla, Mixtla de Altamirano, and the managed areas in the Atlantic Forest by the Tupiniquim of São Paulo to achieve food self-sufficiency. By reclaiming this interconnectedness into narratives of everyday life, we emphasize the persistence and engagement in the exchange of knowledge in various times and places.

Sallum, Marianne [134] see Balanzategui, Daniela

Salmi, Anna-Kaisa, Päivi Soppela (University of Lapland), Sanna-Mari Kynkäänniemi (University of Oulu) and Henri Wallén (University of Lapland)

[151]

"I Had a Reindeer Called Onni . . .": Reindeer Stories, Memory, and the Continuation of Reindeer Herding Culture in Northern Fennoscandia

In recent years, ethnoarchaeological research combining archaeological evidence and traditional knowledge of reindeer herders has added considerably to our understanding of cultural meanings of various reindeer herding practices traceable through the archaeological record. One important aspect brought forward by participant research among present-day reindeer herders is that the relationships with reindeer—particularly working reindeer—are continuous over several seasons and years, the reindeer individuals becoming integrated into people's lives over the long term. This continuity is created in frequent contact with the reindeer, the herders always being mindful of the reindeer, their location, pastures, and well-being, but also their individual life histories and characteristics. The long-term relationships with reindeer individuals are also integrated into memories and stories, which link generations of animals and humans together in the long continuation of reindeer herding culture. In this paper, we will present a few reindeer stories told by the herders. We will examine how these stories reflect various aspects of human-reindeer relationships in reindeer pastoralism today, how they can be used to understand its cultural meaning in the past, and ultimately, what do they mean for the continuation of reindeer pastoralism as a livelihood and way of living in Northern Fennoscandia.

Salomon, Frank [243] see Heaney, Christopher

Salomon Velasco, Lua

[284]

Ceramics and Political Dynamics of the Manteño Culture on the Coast of Manabí, Ecuador

An association between the intricacies of sociopolitical complexity and the diversity in pottery production has been discerned within precolumbian societies. To illuminate the facets of the Manteño sociopolitical framework, this study undertakes a comparative analysis of pottery assemblages across Manteño Julcuy, Cabo Pasado, Nuevo Manta, Puerto Cabuyal, Picoazá, and Cerro Hojas Jaboncillo—all settlements inhabited by the Manteño people prior to the Spanish colonization. Through an examination of the composition, nine primary pottery types and four corresponding subtypes, each exhibiting a total of 36 variations, were catalogued. Simultaneously, the artifacts exhibit a series of recurrent decorative characteristics that transcend all six examined locations. This suggests a notable complexity in Manteño Socio-Political Organization, thereby implying a minimal range of ceramic variation within this context.

Saltini Semerari, Giulia (University of Michigan)

[205]

Chair

Saltini Semerari, Giulia (University of Michigan)

[205]

Culture Contact and Gender Dynamics in Early Iron Age Southern Italy

While both gender archaeology and culture contact studies have well-developed bodies of theory, the intersection between these is undertheorized, especially outside more recent and better-documented historical archaeology. This is problematic, since any process of interaction potentially implicates divergent gendered expectations and norms and can upset previous balances by altering resources and demography in a community. In this paper, I propose a theoretical framework for studying gender in situations of culture

contact by exploring the gendered entanglements between local southern Italian communities and Aegean newcomers in the ninth–sixth centuries BC. This was a period of intense social change in southern Italic prehistory, eventually leading to the creation of Greek colonies along its shores. This process entailed the close and direct involvement of local communities, both as trading partners and, later, as co-habitants within the same settlements. However, the impact of this trajectory of interaction on the gender organization of local and (later) mixed communities has yet to be fully understood. Here, I draw from feminist perspectives and culture contact theory to reconstruct how these encounters unspooled several parallel processes of interaction across genders, class, and geographical origin.

Sammons, Claire, Dakotah Brown (Trinity University), Zoe Flores (Trinity University), Chris Junginger (Trinity University) and Jennifer Mathews (Trinity University)

[99]

From Municipal Dumpsite to Private Liberal Arts University: Insights into the City of San Antonio from a Nineteenth-Century Midden

The modern-day campus of Trinity University is located on a nineteenth- and early twentieth-century municipal dump site on what was then the margins of the city of San Antonio, Texas. The land also served as a limestone rock quarry for the Alamo Cement Company (1884–1931), a community baseball diamond, and a lover's lane. The university bought the land and began construction in the 1950s, promptly ending the site's previous uses. A recent archaeological surface collection of the site, currently used as a frisbee golf course and walking track, has recovered thousands of artifacts. Laboratory analysis and archival research into these objects has provided insight into the daily life of low-income and working-class San Antonians during this early occupation. In addition to discussing the ever-changing history of the space, we will discuss our findings on artifacts such as Gebhardt Chile Powder bottles, Ball Mason jars, Vaseline containers, porcelain baby dolls, and opium vials.

Samuelsen, John (Arkansas Archeological Survey; University of Arkansas), Adriana Potra (University of Arkansas), Barry Shaulis (University of Arkansas) and Erik Pollock (University of Arkansas)

[337]

Diagenesis and Preservation of Pb Isotopes in Ancient Human Tooth Enamel Using Multiple Samples from the Same Tooth

Complications with diagenetic contamination of ancient human tooth enamel is of primary concern for Pb isotopic studies. While conducting a study of a Caddo skull-and-mandible cemetery in southwest Arkansas (in collaboration with the Caddo Nation), it became clear that many samples were contaminated by soil Pb. Additional samples from the same teeth were subsequently run with different methods. These methods successfully removed the diagenetic Pb content from the teeth. A comparison of multiple samples, their trace elemental concentrations, and their Pb isotopes show clear patterns associated with diagenesis and the lack thereof. The grouping of individuals in clusters provides additional clarity as to what patterned effect diagenesis has on Pb isotopic signatures. The differences between the original and successful methods that led to the removal of contamination will be discussed. While successful, these methods led to the reduction of Pb concentrations in the tooth enamel, making obtaining valid Pb isotopic data more difficult.

San Roman, Manuel (Universidad de Magallanes), Ismael Martínez (Universidad de Magallanes), Robert McCulloch (Centro de Investigacion en Ecosistemas de la Patagonia), Jimena Torres (Universidad de Magallanes) and Flavia Morello Repetto (Cape Horn International Center)

[174]

Maritime Settlement of Fuego-Patagonia Archipelago: New Archaeological Records from the Middle Holocene (6300–5000 BP) at Navarino Island, Chile (55° S / 67° W)

In the context of research reassessing the chronology and distribution of early evidence for maritime settlement at Patagonia and Tierra del Fuego, we have developed surveys in different areas of the archipelago to expand the geographical scale of the search, thus allowing us to incorporate aspects related to the

geographical directionality of the process. The work that we present reports new findings detected in Navarino Island. They correspond to the sites Ensenada Villarino 61 and Wulaia 15, located in the north and west coast of the Island, whose dates place them between 5000 and 6300 BP, respectively. The main characteristics of the technological assemblages (lithic and bone) and the subsistence strategies deployed are reported, comparing these records with other sites of this period in the region. This presentation is funded by grants: FONDECYT 1211976, FONDECYT 1200727, ANID/BASAL FB210018.

San Roman, Manuel [9] see Martin, Fabiana

San Roman, Manuel [9] see Morello Repetto, Flavia

San Roman, Manuel [77] see Reyes, Omar

San Roman, Manuel [158] see Torres, Jimena

Sánchez, Blanca (Arqueóloga - Conservadora), Megan Salas (Conservadora), Gianella Pacheco (Arqueóloga - Conservadora), Alex Clavo Cruz (Conservador) and Cesar Velasquez (Conservador)

[13]

Conservación de la arquitectura en tierra y pinturas murales de Pañamarca

La Conservación de la arquitectura en tierra y pinturas murales del proyecto “Paisajes Arqueológicos de Pañamarca” en las temporadas 2022 y 2023, se desarrollaron en paralelo a los trabajos de excavación, teniendo en consideración la vulnerabilidad estructural así como la fragilidad de los murales pictóricos, que desde su construcción hicieron frente a distintos factores de degradación trópicos y antrópicos, además de la exposición a una nueva realidad climatológica al momento de su descubrimiento. La metodología abarca la investigación integral e interdisciplinaria establecida a partir de la necesidad de los sectores intervenidos que han demandado diferentes acciones de acuerdo a su grado y tipo de patología, partiendo de las actividades preliminares (antes de la excavación), la conservación preventiva estructural y pictórica (durante la excavación) y finalmente las actividades de protección (después de la excavación) garantizando que evidencias arqueológicas estructurales y pictóricas, perduren en el tiempo. La conservación no solo es responsable de garantizar la protección y preservación del patrimonio cultural como tal, va más allá del aspecto físico, se trata de proteger un legado histórico, el cual se refleja en la identidad de su comunidad la cual permite el desarrollo socioeconómico a partir de su protección y difusión.

Sanchez, Gabriel (University of Oregon)

[15]

From the Varrío to the Academy: Chicano Perspectives in Indigenous Archaeology

As a first-generation scholar from a low-income campesino background, the lived experience of socioeconomic inequality, racism, and other issues influence teaching, research, and scholarship. While the varrio, or “hood,” is often associated with negative connotations, positive aspects, such as community, respect, and convivencia, are overlooked and underappreciated. These collectivist cultural values are distinct from Western norms, highlighting independence and individualism. In this paper, I highlight how BIPOC scholars, especially those from the varrio, may gravitate to archaeological research that supports collaborative and community-based research practices like those found in Indigenous archaeology.

Sánchez, Jhean Carlos [176] see Muro Ynoñán, Luis

Sanchez, Luis

[157]

Aproximación al estudio de forma-función de la cerámica de contextos rituales en dos sitios con arquitectura monumental en el Valle Central de Costa Rica: 750-1150 dC

Trabajos pormenorizados a nivel de forma-función para la caracterización de actividades y espacios sociales

son raros en las investigaciones arqueológicas intra-sitio en el Valle Central de Costa Rica, incluyendo asentamientos complejos y con construcciones monumentales características del 750 al 1550 dC. Para el caso de los sitios Chagüite (C-151Ch) y Agua Caliente (C-35 AC), excavaciones llevadas a cabo por el Museo Nacional de Costa Rica recuperaron depósitos nutridos de fragmentos de vasijas cerámicas insertos en los complejos arquitectónicos y en proximidad a áreas funerarias muy bien delimitadas por lo que se presume que eran vertederos originados por fiestas o celebraciones de carácter público y funerario. Alrededor de este supuesto, se propone un análisis no instrumental de cerámica para lo cual se contemplaron tres contextos distintos buscando examinar la representatividad de distintos tipos funcionales. Este tipo de estudios también debe cimentarse en rigurosos análisis de huellas de uso y de propiedades tecno-funcionales de la cerámica, por ahora, el aporte principal que se espera de este ensayo es el de proveer de información comparativa que sirva para una mejor definición y caracterización de los espacios sociales en asentamientos complejos tardíos del Valle Central de Costa Rica.

Sanchez Balderas, Adriana (University of Victoria) and Joel Palka (Arizona State University)
[230]

Water Mountain, Ritual, and Maya Community Cohesion at Mensabak, Chiapas, Mexico

Maya established communities at Mensabak, Chiapas, instead of other adjacent lakes because of its impressive water mountain on an island where a major river is born. People traveled and pilgrimaged up the Tulijá River to live near Mirador Mountain (Chakaktun “red-hollow stone / cave-of water” in Lacandon Mayan) where they constructed multiple shrines and terraces to communicate with powerful spiritual forces residing there. Mirador is a high mountain that contains several caves and cenotes, in addition to a red-stained limestone cliff on its east side. Preclassic (ca. 200 BCE–200 CE) and Late Postclassic (ca. 1300–1600 CE) Maya aligned their buildings with this impressive landscape feature. Mirador Mountain became an important symbol of community over time and has been the location of collective rituals that united people in the region. Today, the Lacandon Maya state that Mirador is the center of the world and home to important local gods, who are consulted for community health, subsistence, and transition to the realm of the dead of its members. The archaeological and cultural information indicates that Mirador Mountain has been an archetypical Maya version of Nahuatl *altépetl*: a water mountain that represents a people, polity, and ritual landscape.

Sánchez De La Torre, Marta (SERP, Universitat de Barcelona), Manuel Alcaraz-Castaño (University of Alcalá), Xavier Mangado (SERP, University of Barcelona), Samuel Castillo-Jiménez (University of Alcalá) and Bernard Gratuze (Institut de Recherche sur les Archéomatériaux)

[162]

Geographically Broad Social Networks in Southwest Europe during the Solutrean: The Origin of Siliceous Rocks Exploited at Peña Capón (Central Spain)

The Solutrean of southwest Europe (~25,000–20,000 cal BP) is an outstanding case for studying human mobility and social networks within harsh environmental conditions, given its coincidence with the Last Glacial Maximum. However, little is known about these topics in the inland territories of the Iberian Peninsula. Although it was assumed that humans avoided the Iberian hinterland during the coldest periods of the Last Glacial, recent research has demonstrated that some interior regions were recurrently settled. Thus, investigating networks connecting these regions with other areas is essential for understanding population dynamics and human-environment interactions. We present results on chert sourcing and mobility patterns of hunter-gatherers occupying the Peña Capón rockshelter (central Spain) during the Solutrean. We conducted macroscopic, petrographic, and geochemical analyses by means of LA-ICP-MS. The statistical treatment of data has allowed connecting different archaeological chert types with a specific geological source. Then, we used GIS tools to establish the least cost routes potentially connecting the archaeological site with the rock sources. Results show that siliceous rocks exploited at Peña Capón come from a wide variety of regions, including areas well beyond inland Iberia, thus demonstrating the existence of long-distance contacts during the LGM.

Sánchez Díaz, Francisco [155] see García Sanjuán, Leonardo

Sánchez Gamboa, Ángel (Coordinación Nacional de Conservación del Patrimonio Cultural- INAH) and Esther Parpal Cabanes (Universitat de València; University of California)
[230]

Women Elites in the Royal Court of Tonina, Chiapas

New hieroglyphic and iconographic evidence allows us to preliminary reconstruct women's political hierarchy inside Tonina's royal court during the Late Classic period. As it is well known, parentage statements are very scarce in the inscriptions of Tonina and limited to maternal ancestry. Aside from the importance of local female nobility, there is evidence of the arrival of powerful female foreigners: this is the case of the mother of "Ruler 8" who was from Pomona's royal court in the Tabasco region. The recent discovery of funeral monuments related to female elites bearing the *ix sajal* title is of the greatest importance to understanding women's participation not only in the political affairs inside the royal court of Tonina but also beyond the kingdom as provincial governors. Therefore, visualizing their participation in the courtly life of the site is essential to avoid gender bias in the reconstruction of Tonina's history. And, overall, to promote a study of Classic Maya society from a more integrative approach.

Sanchez Garcia, Julio, Bradymir Bravo Meza (Universidad Nacional Mayor de San Marcos), Debora Infanzon Soriano (Universidad Nacional Mayor de San Marcos), Fabrizio Mora (Asociación de Siembra y Cosecha de Agua [ASYCA]) and Luciana Miovich (Asociación de Siembra y Cosecha de Agua [ASYCA])
[243]

Recuperando la memoria hidrosocial y arqueológica de la Meseta de Marcahuasi: Un enfoque hacia el desarrollo sostenible en la Sierra de Lima

En tiempos prehispánicos, las comunidades ubicadas en la Meseta de Marcahuasi (San Pedro de Casta, provincia de Huarochirí, Lima) manejaron las estaciones lluviosas y secas de su territorio mediante el uso de sistemas de siembra y cosecha de agua para el abastecimiento de una sostenible economía agrícola. Con el tiempo este manejo del "paisaje hidrosocial" se ha ido perdiendo. Las migraciones, el cambio climático y un turismo desligado de las tradiciones locales han provocado la pérdida de saberes ancestrales, la degradación del patrimonio y la dependencia económica externa. La pandemia y el confinamiento evidenciaron aún más estos problemas de autosuficiencia y desconexión tradicional. Con el turismo y la agricultura afectados por la falta de agua, el municipio y la comunidad de San Pedro de Casta buscan recuperar la memoria hídrica de Marcahuasi como modelo de desarrollo sostenible. En el presente año, un equipo multidisciplinario de arqueólogos y arquitectos venimos trabajando un reconocimiento de los sitios arqueológicos y proponemos estrategias para complementar las actividades locales de gestión hídrica en paisajes arqueológicos, reivindicando los conocimientos tradicionales y potenciando un modelo turístico sostenible para el beneficio de la naturaleza, la sociedad y la preservación del patrimonio cultural.

Sánchez Herrera, Luis [222] see Cybulski, Jonathan

Sánchez Herrera, Luis [222] see Sharpe, Ashley

Sánchez Herrera, Luis [222] see Smith-Guzmán, Nicole

Sánchez Jacobo, Jesús [254] see Torres Porras, Alicia

Sánchez-Martínez, Javier (Universitat Autònoma de Barcelona), Nolan Ferrar (ICArEHB, Universidade Do Algarve), João Cascalheira (ICArEHB, Universidade Do Algarve) and Rafael Mora (I Centre d'Estudis del Patrimoni Arqueològic [CEPA])

[126]

The Deconstruction of Technical Behavior: Assessing the Significance of Low-Cost Technologies in the Upper Paleolithic
Expedient technologies are linked to low-cost behaviors, aimed at producing stone artifacts with low technical complexity and minimal temporal requirements. Traditionally, these have been associated with assemblages characterized by simple production systems mainly geared toward obtaining flakes. In recent years, these attributes have been described in Lower and Middle Paleolithic assemblages. However, their presence in Upper Paleolithic contexts remains notably limited. This is because industries associated with *Homo sapiens* have primarily focused on lithic specialization and the increase of technical complexity, masking the existence of expedient behaviors. In this study, we analyze Upper Paleolithic assemblages from Cova Gran de Santa Linya (NE Iberia) and Vale Boi (SE Iberia) to detect and discuss the occurrence of expedient behaviors. The study of these industries can serve multiple purposes: (1) extending our understanding of expedient behavior and low-cost technologies associated with *Homo sapiens*, (2) exploring diverse manifestations of expedient behavior from a diachronic perspective, (3) elucidating the role played by expedient technologies in technically complex assemblages, and (4) providing new insights to understand the aim of low-cost behaviors and their significance from an evolutionary and adaptive standpoint.

Sanchez Miranda, Guadalupe (INAH Sonora)

[75]

Chair

Sanchez Miranda, Guadalupe (INAH Sonora), Alejandra Abrego (Centro INAH Sonora), John Carpenter (Centro INAH Sonora), Astrid Aviles (Centro INAH Sonora) and Elisa Villalpando (Centro INAH Sonora)

[75]

Assessing the La Playa Projectile Point Assemblage

More than 300 projectile points have been collected from the La Playa site. The vast majority were found on the surface without archaeological contexts. The site begins to be used continuously from the middle Holocene (ca. 7,000 years) by Archaic hunter-gatherer/forager groups as a locality included in their residential mobility rounds. During the early and middle Holocene, the Boquillas river floodplain was an important locality to find water and prey and collect mesquite seeds, wood, and herbs with seed near the river. Around 5,000 years ago better weather returned to the Sonoran Desert, and the Boquillas River was an oasis where a sedentary community with a much larger population could settle and farm corn that they obtained from their neighbors from the south. Here we present a cultural history of the site using projectile point styles. We also offer some demographic data and interaction data for the Archaic and Early Agricultural period peoples in the Sonoran Desert, comparing the La Playa points with other studied sites in the Plains of Sonora.

Sanchez Miranda, Guadalupe [75] see Martínez-Tagüeña, Natalia

Sanchez Miranda, Guadalupe [75] see Pailes, Matthew

Sánchez-Morales, Ismael (Arizona Museum of Natural History)

[225]

Reanalysis of the Aterian Lithic Assemblage from Layer 6 of Mugharet el'Aliya: Specialized Activities in a Cave Context during the Middle Stone Age of Morocco

The cave of El'Aliya on the Atlantic coast of Morocco contained a Middle Stone Age (MSA) occupational sequence that produced Aterian lithic assemblages (i.e. with tanged tools) dated to Marine Isotope Stage 3 (Layers 6 and 5). The site was excavated during the late 1930s and 1940s, and the lithic assemblages from the MSA deposits were originally described by Howe in 1967 and later by Bouzouggar et al. in 2002.

Comparative analyses of the lithic assemblage from layer 6 and those from other MSA sites in Morocco

conducted in 2022–2023 indicate that potential collection bias introduced during excavations was not extensive and that the assemblage contains: (1) a strikingly high representation of bifacial foliates and other pointed tool forms, some exhibiting potential impact fractures and other types of damage; (2) incomplete reduction sequences suggesting that many of the stone tools were not manufactured on site; and (3) retouched artifacts that show unexpectedly high rates of reduction. The association of this lithic assemblage with a zooarchaeological collection reflecting specialized and intense hunting of gazelle, suggests that Mugharet el'Aliya may have been used by groups of highly mobile foragers as a specialized location for the processing of animal resources hunted in the surrounding landscape.

Sánchez Mosquera, Amelia (Consultora en Patrimonio y Cultura)

[222]

Los peces de Salango y la mirada de Richard Cooke hacia Sudamérica

En 1989 el Smithsonian Tropical Research Institute de Panamá, liderado por Ricard Cooke, organizó un curso de formación en estudios neotropicales para arqueólogos del América Latina, participamos profesionales de Colombia, Venezuela, Ecuador, Panamá, Costa Rica y Nicaragua. En esta contribución se realizará una reseña del curso y se evaluará el alcance de la visión que Cooke tuvo y su influencia en profesionales que nos formamos en la disciplina, la creación de colecciones comparativas, las nuevas visiones de estudios locales y regionales, publicaciones, etc.

Sánchez Sosa, Uriel (Centro INAH Oaxaca; Universidad Anáhuac Oaxaca) and Leobardo Pacheco Arias (Centro INAH Oaxaca)

[252]

The Transformations of the Sacred Spaces Linked to the Ancestors in Mitla, Oaxaca: A Historical and Phenomenological Perspective

This paper presents an investigation on how the transformations of rituals and spaces linked to ancestors have occurred in San Pablo Villa de Mitla, Oaxaca, from the Late Postclassic to the present. The spaces known as the Grupo de la Iglesia and Grupo del Calvario are addressed, both with antecedents from prehispanic times, as places where sacred rites are performed today that allow communication with the ancestors. This study is enriched with ethnographic work carried out from a vision and dialogue with the local Zapotec culture. The work is carried out by two researchers, from a phenomenological, historical, and archaeological perspective. In parallel, the phenomenon of cultural commercialization and its local social consequences are exposed, it also helps to raise new elements to rethink economic development initiatives that can be in dialogue with the protection and conservation of the cultural heritage of Mitla.

Sandweiss, Dan (University of Maine)

[40]

Discussant

Sandweiss, Dan [310] see Kelley, Alice

Sanft, Samantha (Cornell University)

[60]

Refining Haudenosaunee Site Sequences in the Cayuga Lake Region

In this paper, I refine fifteenth- and sixteenth-century village relocation sequences for Haudenosaunee sites located on both the eastern and western sides of Cayuga Lake (in what is today central New York State). This area is the traditional homeland of the Cayuga Nation. First, I present information on Cayuga sites, including data on settlement types and recovered artifacts and ecofacts. Next, I review the conventional perspectives on regional site sequences. Then, focusing on the seven radiocarbon-dated Cayuga sites, I evaluate recently-run AMS radiocarbon dates and employ Bayesian chronological modeling to test and refine

occupation dates and relocation sequences. I conclude by presenting a refined site sequence for this region. Assessing chronological models alongside settlement and artifact data, I provide new information about fifteenth- and sixteenth-century Cayuga settlement patterns, mobility, resource use, and exchange.

Sanger, Matthew [175] see Semon, Anna

Sangriso, Paolo [202] see Purcell, Gabrielle

Sankey, Joel [283] see Fairley, Helen

Sano, Katsuhiko [281] see Izuho, Masami

Santana Sagredo, Francisca [77] see Uribe, Mauricio
Santana Sagredo, Francisca [223] see Wande, Claudio

Santoro, Calogero [119] see Sitzia, Luca
Santoro, Calogero [337] see Ugalde, Paula

Santos, André [162] see Mosquera Castro, Tania

Santos-Hernández, Jenniffer [1] see Rivera-Collazo, Isabel

Santucci, Vincent [329] see Rich, Megan

Saper, Shelby (University of Nevada, Reno), Richard Rosencrance (University of Nevada, Reno) and Katelyn McDonough (University of Oregon) [337]

Source Analysis of Cascade Points from the Connley Caves, Oregon (35LK50)

Researchers commonly use X-ray fluorescence (XRF) to source lithic tools and their associated byproducts made on obsidian and fine-grained volcanic toolstone. The results of such studies can be used to reconstruct lithic conveyance patterns, which in turn can tell us about hunter-gatherer mobility, territoriality, and/or exchange. In this study, we report XRF data for the Cascade projectile points from the Connley Caves (35LK50) in central Oregon. The results provide new insights into early and middle Holocene lithic conveyance in the northern Great Basin.

Saranca, Julianne [62] see France, Christine

Sarathi, Akshay (Texas A&M University) [245]

Baobabs, Caves, and Towns: An Alternative View of Island Urbanism in Precolonial Zanzibar

Studies of urbanism in East Africa have tended to focus on the medieval “stone towns” that dot the coast.

However, studying these more traditional expressions of urbanism produces an incomplete picture of the settlement patterns of precolonial East Africa. In islands such as Zanzibar, settlement patterns are unique due to the presence of limestone caverns with access to freshwater. These caverns, which number more than 500, have served as dwelling places for humans for millennia. Further, forager camps, fishing stations, and seasonally occupied locations cannot be ignored. I argue that the activities of town dwellers, cave dwellers, mobile foragers, fishers, and seasonal visitors intersected in creative ways that challenge traditional understandings of urbanism and force us to look beyond traditional settlements to a landscape of practice across which different human groups interacted in a variety of ways.

Sarathi, Akshay [18] see Faulkner, Patrick

Saravia, Francisco [159] see Canuto, Marcello

Sarjeant, Carmen (Archaeological Investigations Northwest), Eva Hulse (Archaeological Investigations Northwest) and Terry Ozbun (Archaeological Investigations Northwest) [133]

Legacy Collection from a Mid-Columbia River Village Site Reveals Surprising Late Precontact Focus on Terrestrial Mammal Hunting and Processing Bone and Stone Items for Use and Export

Archaeological data and collections from the Chiawana Park site, a precontact village on the Columbia River in Washington State, were analyzed decades after its original excavation. Archaeological excavations conducted in 1967 produced huge assemblages of animal bones, bone tools, and stone tools.

Geoarchaeological, faunal, and technological artifact analyses address methods and challenges faced when analyzing legacy collections. The archaeological materials appear to date primarily within the last two millennia and are associated with a possible mat lodge. Results of faunal analyses suggest an emphasis on hunting pronghorn but surprisingly little evidence for salmon fishing. Extensive bone tool manufacturing and use is represented especially by bone spear points and awls. Stone tools are dominated by simple flake tools and specialized tools for bone and wood working. Projectile points for both bow-and-arrow and for dart-and-atlatl weaponry are present along with evidence for processing local toolstones to produce bifacial blanks for exports. The data gathered during the reanalysis fill in important details that were absent from the original excavation reports.

Sassaman, Kenneth [317] see Mahar, Ginessa

Sassaman, Kenneth [178] see Pugliese, Francisco

Sastre Prats, Ines (Instituto de Historia, CSIC) and Brais Currás Refojos (Instituto de Historia, CSIC) [298]

Rethinking Egalitarianism and Segmentarity from Archaeological Analysis

For a researcher raised on a political-economy archaeological tradition, the assertion that the origin of inequality is not the relevant point in anthropological research is a shake. But after a careful reading of *The Dawn of Everything*, we are still persuaded that social relations of production remain the heart of the matter. The aim of this communication is twofold. We will present an overview of Spanish social theory on archaeology to show to what extent it is coherent with the book's proposals. Clastres's ideas and peasant societies are both at the core of many Iberian Peninsula archaeological researches. We will also describe the archaeology of Iron Age northwestern Iberia in order to foster the discussion of egalitarianism as an historical construction, and not as an "state of nature" or primitive fiction. Two issues are especially relevant for us: the assertive agency against hierarchization and the existence of egalitarianism in complex agrarian social formations.

Sathiakumar, Abhishek [328] see Kitteringham, Lia

Satterwhite, R. David [199] see Dombrosky, Jonathan

Sattler, Robert, Christian Thomas (Yukon Heritage Branch, Whitehorse, Yukon Territory), Angela Younie (Far Western Anthropological Research Group, Davis), Thomas Gillispie (Tanana Chiefs Conference, Fairbanks, Alaska) and Jeffrey Rasic (National Park Service, Alaska Region)

[120]

Archaeology of the Upper Yukon River Canyon Riparian Zone: Alaska and Yukon Territory

The Upper Yukon River Canyon traverses the international border between Alaska and the Yukon Territory. We consolidate over 60 radiocarbon dates among numerous sites and develop a first-approximation model spanning the Chindadn to Dene Traditions in Eastern Beringia. The radiocarbon date series is ordered temporally in 10 discrete Bayesian probability density plots. Consolidation of available radiocarbon dates among over 40 components, associated lithics, and the geomorphology of the Yukon River contextualize cultural patterns in a geographic area that is underrepresented in the archaeological literature. Observed cultural patterns include dated components with sourced obsidian from geographic areas peripheral to the UYRC that span a broad geographic range. Two dated early Holocene Denali microlithic components support the hypothesized movement of microblade technology from central Interior Alaska to the central and southern Yukon Territory. A relatively large number of radiocarbon dated components in the late Holocene span the two regional White River volcanic eruptions that differentially blanketed the UYRC study area with tephra. A novel assemblage of southern sourced obsidian with the initial dated copper at the time of the eastern lobe of the White River eruption suggests an expanded social network following the volcanic event.

Sattler, Robert [49] see Chan, Ching Yi (Mavis)

Sattler, Robert [120] see Rasic, Jeffrey

Sauer, Peter [200] see Bernard, Hayden

Saumur, Jennifer [214] see Forest, Marion

Savateri, Sami (University of Central Florida)

[210]

Mapping the Mayordomo's Procession: A Study of Ritualized Movement in Oaxaca

Ritualized movement such as processions are one way in which people in Oaxaca, both past and present, interact with and shape the landscape. To better understand the sacred landscapes of Postclassic communities in Oaxaca, this project examines ritualized movement through the analysis of a modern procession as described in James Greenberg's ethnography, *Santiago's Sword*. This procession route is used by the mayordomo or host of a ritual fiesta on the first of a 13-day period leading up to that fiesta. Using the descriptions and names of stops given in the text in Chatino, Spanish, and English, the stops were located and mapped in a geographic information system. Then, existing pathways and roads were utilized to map possible routes between each stop. Mapping this procession provides insight into the types of stops visited and paths used during a procession in a modern Chatino community, which can be used to form hypotheses about processional paths and the stops along them in past communities and increase understanding of human interaction with the landscape in the Postclassic.

Savoy, Megan (University of Michigan) and Ari Au
[68]

Examining Dental Wear of Mongol Period Elites from Khövsgöl Province, Northern Mongolia

The purpose of this study is to explore the social status and daily lives of Mongol-era (twelfth to fourteenth centuries CE) “common elites.” Common elite is a general term used in this region to describe a group of high-status people that were not in the immediate lineage of Chinggis Khan. We investigated whether cultural activities such as food preparation, food consumption, and occupational tasks were reflective in individuals’ dental wear patterns. The data presented in this study consists of skeletal material salvaged from looted and undisturbed tombs ($N = 20$) spanning across three mountainsides in Khövsgöl Province, Northern Mongolia. Tooth occlusal wear was scored using Smith’s (1984) crown scoring system. We hypothesize that the degree and location of dental wear may elucidate dietary and cultural practices including occupational activities. We will also investigate whether dental wear delineates occupational and dietary patterns pertaining to gender and age. Future work includes using dental and skeletal data from these field seasons along with previous excavations of “high-status elites” from Khorig, Northern Mongolia to explore if differences in dental wear can be identified between these two groups.

Savoy, Megan [198] see Parnas, Michael

Sawicki, Jakub (Academy of Science of the Czech Republic)
[91]

A United Europe of Things: Similarities and Differences in Small Finds across Later Medieval Europe

The idea of “unity of culture” in medieval Latin Europe is well known in historical texts, especially when it concerns the so-called “Europe north of the Alps.” Scholars have often suggested that due to long-distance trade, widespread knowledge of Latin, and shared religious ideas, we can observe cultural similarities throughout late medieval Europe. For the past five years, we have been testing the extent to which this bold statement is true in terms of the “unity” of material culture, especially small finds, by holding sessions at the annual conference of the European Association of Archaeologists. The results led to an overview publication and the creation of the European Medieval Finds Network focused on supporting research on small finds going beyond the usual national and regional limits. In this presentation, I intend to discuss the opportunities and challenges of studying this group of specific medieval artifacts from the pan-European perspective on an example of later medieval dress accessories (thirteenth–sixteenth centuries). This specific group of artifacts illustrates how innovations in production technology correlate with social change and can be traced in archaeological material across the whole continent.

Sayle, Kerry [42] see Hamilton, Derek

Sayre, Matthew (High Point University), Silvana Rosenfeld (High Point University) and Erick Acero-Shapiama (Proyecto Arqueológico Chavín de Huántar)
[27]

Daily Life Outside the Monument: Recent Excavations at the La Banda Sector, Chavín de Huántar

Chavín de Huántar is a very important Formative period site located in the Conchucos region of north-central Peru. It has unique monumental architecture, which includes a series of buildings with complex galleries and canals, as well as finely crafted stone sculptures. Although substantial research has been conducted on Chavín iconography and architecture, much less is known about the people who lived and worked outside of the monumental core. In this talk we will discuss our recent excavations at the La Banda sector in 2022 and 2023, located across the river from the monumental core, to interpret the material evidence left by the people living here. This sector appears to have been heavily occupied as evidenced by the number of rooms and the occupation sequence. There is evidence of ritual activity: parts of animals and worked tools were deposited under some constructions. Formal canals, similar to some of those found in the monumental core, were also excavated in La Banda. The results of some of the analyses, including bone

artifacts and radiocarbon dates, will be presented and discussed during this talk to better understand the daily lives of the people who supported the activities at the Chavín temples.

Sayre, Matthew [27] see Contreras, Daniel

Scaffidi, Beth [288] see Biwer, Matthew

Schachner, Gregson [269] see Solometo, Julie

Schaefer, Jonathan (Tetra Tech Inc.), Kathryn Turney (Tetra Tech Inc.), Aliceia Schubert (Tetra Tech Inc.), Deborah Huntley (Tetra Tech Inc.) and Haley Wilkerson (Tetra Tech Inc.) [175]

Chacoan Roads and Landscape Archaeology in the Eastern Red Mesa Valley, New Mexico

Chacoan culture is well known for its examples of communal building projects and monumental architecture. Chacoan roads, apart from great houses, are perhaps the most well-known yet enigmatic examples of such. In the Red Mesa Valley of western New Mexico, we examine how several newly identified road segments manifest themselves on the landscape as well as how they relate to and served to integrate the larger local Chacoan Community.

Schaefer, Jonathan [269] see Turney, Kathryn

Schaefer, Jordan (University of Tennessee, Knoxville) [244]

Defining the Spatial Structure of Rock Art in 12th Unnamed Cave, Tennessee, through 3D Modeling and GIS

Twelfth Unnamed Cave is a dark-zone cave art site in Tennessee that contains over 300 individual petroglyphs. Like many cave art sites in the American Southeast, the locations of the art within the cave appear to be structured. However, traditional spatial analytical methods have made it difficult to understand the distribution of artwork across the morphologically complex site. This study uses a 3D photogrammetric map of 12th Unnamed Cave to study the locations of petroglyphs from a new perspective. Various 3D GIS tools are utilized to measure the glyphs' locations from prominent cave features, the volume of the chambers in which they are located, and their visibility from different vantage points. Results suggest that experience and perception played dominant roles in determining where certain motifs were prioritized, and that 3D modeling is a powerful tool for quantifying these phenomenological variables.

Schaefer, Jordan [156] see Simek, Jan

Scharf, Elizabeth (University of North Dakota) [24]

Past Particles: Palynology at Poverty Point

The first pollen work at Poverty Point was conducted by Sears at the request of Ford and Webb in the 1950s. Since then, more evidence has been collected, leading to alternate interpretations of the site and resolving some matters while raising new questions to explore. This paper reviews palynological work, past and present, and the implications of these projects. Issues that will be addressed include the origin of sediments used in mound building, local vegetation changes over the past 5,000 years, microscopic charcoal and its relation to fire records, and comparisons to pollen results from other Archaic sites.

Scheidecker, Dave [312] see Shriver-Rice, Meryl

Schellinger, Sarah [55] see Minor, Elizabeth

Schenkenberger, Kaelyn (University of Alaska, Anchorage), Ryan Harrod (University of Alaska, Anchorage) and Norma Johnson (Chickaloon Village Traditional Council)

[7]

Shifting Bioarchaeological Perspectives in Alaska: Community-Centered Projects with Indigenous Partners and Project Participants from Descendant Communities

This presentation is focused on highlighting the value of conducting bioarchaeological research that not only works with descendant communities but is driven by the questions they want answered and adheres to their goals and management expectations surrounding their ancestors. Bioarchaeological projects that partner with Alaska Native communities are unique among the growing pool of collaborative archaeology in the United States and are useful in assessing what currently facilitates successful partnerships with the communities whose heritage and ancestors we work with, and how those successful partnerships culminate in research processes and outcomes. We will discuss projects within Alaska that work with and for these communities, and the effect of increased descendant inclusion and agency in our and others' bioarchaeological work.

Scher, Naomi [87] see Carney, Molly

Scherer, Andrew (Brown University)

[246]

Childness, Humanness, and Violence among the Precolonial Maya

Over the past decade or so, bioarchaeologists working in the Maya area have called attention to how permanent alterations of the body transformed immature bodies into fully realized humans. Among these alterations were cranial and dental modification, painful practices that were not without risk of injury or even death. While some children were cultivated into human adulthood, others were selected for premature death as evidenced by sculptural and painted imagery, as well as archaeologically recovered human remains. This paper reflects on the role of violence in making humans out of some children, but not others, while also considering when children themselves became violent actors.

Schleher, Kari (Maxwell Museum, University of New Mexico), Suzanne Eckert (Arizona State Museum, University of Arizona) and Matthew Schmader (University of New Mexico)

[287]

Impacts of the Coronado Expedition on Social Networks at Piedras Marcadas Pueblo, New Mexico

Between late 1540 and early 1541, the Vázquez de Coronado expedition laid siege to the Southern Tiwa ancestral community of Piedras Marcadas and fought the Pueblo's residents. Eventually, the Coronado expedition left the Rio Grande Valley and moved north and east to the Plains. Piedras Marcadas was occupied for about 250 years prior to the siege, and occupation continued in much reduced form until the early 1600s. In this poster, we explore the social networks reflected in trade relationships of pottery both before and after the siege. Do these social networks change with this event, or do they stay the same? The entire Rio Grande Glazeware sequence, from 1300 to the early 1600s CE, of pottery types (Glaze A to Glaze F) is found at Piedras Marcadas. Petrographic analysis of the temper and paste characteristics can tell us what other communities or regions the village residents interacted with and if the siege impacted those social networks.

Schloss, Rachel (Cotsen Institute of Archaeology, UCLA)

[76]

Molding Bricks and Making Place: Earthen Architecture in the Cañoncillo Archaeological Complex

The built environment of the Cañoncillo Archaeological Complex in the northern coast of Peru is dominated

by earthen architecture constructed and modified within a span of 1,800 years. Although the sites within the Complex—Jatanca (500 BCE–100 CE), Huaca Colorada (650–950 CE), and Tecapa (800–1100 CE)—were each constructed out of materials sourced from their shared landscape, the stark stylistic and structural contrast observed between these sites reveals essential differences in the conception of place-making and place among the communities that inhabited each site. Thus, Cañoncillo serves as an ideal lens to interrogate the ways in which people across time made places that produced distinctive earthen architecture in terms of form and fabric. A close inspection of these processes of making earthen architecture offers an important vantage point to understand unique conceptions of space and time within the communities that built and dwelled within each site, mutually constitutive relationships between people and the Cañoncillo landscape, and interdependencies among cogent political communities. In this paper, I mobilize the preliminary results of morphological, material, and geoarchaeological analyses carried out between 2018 and 2020 to reconstruct meaningful, site-specific processes of making earthen architecture within the Cañoncillo Archaeological Complex and to consider their implications for understanding intercommunal dynamics.

Schmader, Matthew (University of New Mexico)

[324]

It Takes a Village to Defend a Village: Women, Elders, and Children in Indigenous Resistance during the Contact and Colonial Periods of Central New Mexico (1539–1696)

Warfare and conflict are almost always described in terms of male-centered actions. But it is clear in many cases, such as those during the contact period in the Western Hemisphere, that conflict often involved entire communities thrown into struggles for their freedom and survival. This was quite evident during the first explorations of the American Southwest by outsiders, principally Spanish-led expeditions. The frequently rebellious nature of these encounters is a prominent feature in written descriptions, as is the complete involvement by all members of impacted societies. While the term “noncombatant” is sometimes used, it was unusual for any remaining members of a community to not be part of their active resistance. Women, elders, and children are often described as having been present at, and in some cases directly participating in, the conflicts that ensued. Examples of these groups and their participation in acts of self-defense and resistance are presented in case studies from central New Mexico for the period starting with the Vázquez de Coronado expedition and ending with the last of the Pueblo Revolts (1539–1696).

Schmader, Matthew [287] see Schleher, Kari

Schmidt, Amanda [99] see Heigel, Darren

Schmidt, Kari [174] see Swanson, Steve

Schmitt, Dave [201] see Edwards, Nicolette

Schmitt, Paige [241] see Hayes, Leigh

Schneider, Matthew (University of Miami)

[229]

From Fontaneda to Archie Carr: Sea Turtle Zooarchaeology and Conservation in Southeast Florida

In southeast Florida, sea turtles (Chelonioidae) are both a major focus of conservation efforts and a hallmark of local zooarchaeological assemblages. Despite this abundance however, little work to date has been done to connect these archaeological turtle remains to contemporary sea turtle ecology and conservation. In this paper, I both offer a synthesis of regional sea turtle zooarchaeological literature as well as report the

preliminary results of three analysis methods trialed with sea turtle long bones recovered from the Stock island Midden (8Mo2). The results of these analyses provide data on both the species and age demographic of turtles targeted by ancient hunters, providing possible insights into both hunting methods and seasonality. Furthermore, such data facilitates direct engagement with modern turtle ecology studies. In doing so, this work seeks to demonstrate both the utility zooarchaeological turtle remains hold to local conservation efforts, as well as the importance of properly curating and studying these invaluable sources of ancient ecological data.

Schneider, Matthew [127] see Pestle, William

Schofield, Cayla [202] see Purcell, Gabrielle

Schollmeyer, Karen (Archaeology Southwest)

[111]

Discussant

Schollmeyer, Karen (Archaeology Southwest), Amanda Semanko (University of Arizona) and Martin Welker (University of Arizona)

[268]

Classic Mimbres Period Aviculture at Elk Ridge, New Mexico

People in the ancient Southwest domesticated, tamed, or managed several species of birds. The Late Pithouse and Classic Mimbres (AD 750–1000) archaeological site of Elk Ridge provides a rare example of ancient aviculture in the Mimbres area of southwestern New Mexico. Excavations by Human Systems Research Inc. at Elk Ridge in the upper Mimbres Valley revealed one parrot tarsometatarsus (one of only six positively identified in the Mimbres area) and over 500 turkey bones, including at least 20 individual turkeys found as bone concentrations or partially articulated on or near the floors of excavated rooms. Turkey (*Meleagris gallopavo*) bone measurements and evidence for healed injuries along with contextual data from excavations provide insights into how turkeys were raised at this village, a practice not documented at other sites from this area and time period. Variability in turkey size, age class, and healed injuries are consistent with managed birds, despite minimal evidence for pens. Identification of the parrot bone along with other parrots (*Amazona* sp. and *Rhynchospitta* sp.) in the Southwest is also discussed, with implications for how far these birds were transported in the ancient Southwest.

Scholnick, Jonathan [323] see Munson, Jessica

Schortman, Edward (Kenyon College), Daniel Pierce (Missouri State University), Hector Neff (California State University, Long Beach), John Dudgeon (Idaho State University) and Aaron Shugar (Queens University)

[255]

From One Jar, Many Selves

Red-on-Natural jars, characterized by nearly identical forms and decorations, were used by people of all ranks who lived in the adjoining Naco, middle Chamelecon, and lower Cacaupala valleys of northwest Honduras from CE 600 to 1000. These vessels' ubiquity suggests that those who used them participated in a community of practice that transcended the realms centered on each of the three basins. The different techniques and resources used to shape, fire, and decorate these containers, however, constituted multiple distinct communities of practice enacted in the ceramic workshops operating in each of the valleys. We draw on fieldwork conducted within these production locales together with INAA, petrographic, XRF, and LA-ICP-MS analyses of 424 sherd and clay samples to describe these production-based communities of practice. The research highlights the many ways that social identities can be instantiated as people make and use even

very similar items in regularly recurring routines. It also stresses the importance of attending to the contexts of use and manufacture through which we come to know ourselves as we manipulate things.

Schortman, Edward [157] see Urban, Patricia

Schottmueller, Paul [156] see Boyd, Carolyn

Schray, Svenja (University of Tübingen; University of Connecticut)

[58]

Chair

Schray, Svenja (University of Tübingen; University of Connecticut) and Nicholas Conard (University of Tübingen)

[58]

Technological Studies of Blade and Bladelet Production in the Aurignacian at Geißenklösterle Cave (SW Germany)

Geißenklösterle Cave has played a central role in assessing the timing of the beginning of the Upper Paleolithic in Central Europe and in contextualizing the origins of Aurignacian technological innovations. The Aurignacian of Geißenklösterle is comprised of archaeological horizons II and III dating to between 42,500 and 35,000 cal BP. The site provides a well-stratified and well-dated record from the Aurignacian of the Swabian Jura. In this paper we present current research on the lithic technology used by Aurignacian stone-knappers at Geißenklösterle. We combine techno-typological analyses with numerous lithic refits to identify different operational chains in lithic production. Spatial analyses reveal how and where the inhabitants of the site produced, used, resharpened, recycled, and discarded stone artifacts. Building on the innovative publications on operational chains during blade production by Joachim Hahn and colleagues, we present new results documenting multiple cycles of blade and bladelet production at Geißenklösterle. This work shows how knappers produced bladelets from carinated cores, burin-cores, and regular cores on cobbles and flakes.

Schreiner, Nina (South Carolina Institute of Archaeology and Anthropology at USC)

[97]

Discussant

[72]

Chair

Schreiner, Nina [72] see Lindler, Joseph

Schreiner, Nina [72] see Lofaro, Ellen

Schröder, Marie-Kristin [287] see Ownby, Mary

Schroder, Whittaker (University of Florida)

[230]

Settlement and Political Ecology in the Lower Lacantun River Landscape

Over three field seasons, the Lower Lacantun Archaeological Project has examined the political organization and settlement of the region surrounding the confluence of the Lacantun and Usumacinta Rivers in Chiapas, Mexico. This riverine landscape is unique in the Western Lowlands, presenting risks and opportunities related to seasonal and long-term flooding of the alluvial plain. During the Classic period, this region was likely associated with the poorly understood Lakamtuun kingdom, known from inscriptions from Piedras Negras to Ceibal. This paper addresses recent work in the region, namely the documentation of monuments at the sites of Benemerito de las Americas Primera Seccion, El Palma, and San Lorenzo; the identification of a

ceramic workshop at Benemerito de las Americas Primera Seccion; test excavations at El Palma and Yaxun; regional survey; and ongoing community outreach to develop a long-term project with the modern community of Benemerito de las Americas. These efforts have also included the analysis and ground verification of several lidar datasets, particularly focused on agrarian landscapes and drained fields. Future work will involve additional drone lidar data collection and the generation of a predictive model to locate households and agrarian features based on local knowledge, survey, and ecology, contrasting uplands and floodplains.

Schroeder, Bryon (Center for Big Bend Studies, Sul Ross State University)

[138]

Chair

Schroeder, Bryon (Center for Big Bend Studies, Sul Ross State University) and Devin Pettigrew (Center for Big Bend Studies, Sul Ross State University)

[138]

Seven Millennia of Wood and Reed: A Preliminary Chronology of Weapons Systems from the West Texas Region

The arid west Texas region has a wealth of large perishable assemblages offering unexplored research potential. This talk focuses on weapons systems recovered from both recent excavation work and existing collections from this area. We provide an overview of the diversity and age of the weapons from these contexts and then place them within other well-dated regional examples. These results provide one of the longest nearly continuous records of weaponry from any region, enabling us to build a high-resolution chronology. We use this chronology to offer initial thoughts on changes in design, materials, hunting strategies, prey choice, and key technological transitions in projectile weaponry.

Schroeder, Bryon [98] see Rebaridi, Haley

Schroeder, Sissel (University of Wisconsin, Madison)

[154]

Chair

Schroeder, Sissel (University of Wisconsin, Madison) and Tamara Thomsen (Wisconsin Historical Society)

[154]

The Wisconsin Dugout Canoe Survey Project

Efforts to trace 80 dugout canoes reported from Wisconsin resulted in the identification and documentation of more than 66 and the recognition that six had been destroyed or lost. Wisconsin dugouts range in age from 4,000 years old to the early twentieth century. Dugouts were made from a variety of types of wood and those that date to the last 2,000 years correlate with the nineteenth-century vegetation in the regions where they were found, while the wood choice for older canoes likely reflects the ecological impact of mid-Holocene climate change. The assemblage also records temporal and cultural variation in style and manufacturing techniques.

Schroeder, Sissel [154] see Rodning, Christopher

Schubert, Aliceia [175] see Schaefer, Jonathan

Schubert, Aliceia [269] see Turney, Kathryn

Schuler, Frank [207] see Haynes, Tanner

Schulting, Rick [171] see Werens, Karolina

Schumacher, Emily (University of Tulsa) and Miriam Belmaker (University of Tulsa)

[278]

To Build or Not to Build: An Historical Archaeological Examination of Fort Louise Augusta and the Role of Sovereign Perceptions and Interests in the Construction and Maintenance of Danish West Indian Fortifications

Colonies, as discontinuous frontiers, may be more or less integrated into the homeland, resulting in distinct fortification patterns across time. The former Danish West Indies (DWI) was one such discontinuous frontier, separated from Copenhagen by more than 7,500 km yet a key part of the Danish economy. By examining changes and continuities in the construction and repair of fortifications across two distinct phases of Danish occupation of the West Indies through the excavation and radiometric dating of construction phases in Fort Louise Augusta, St. Croix, DWI, this paper sheds light on how sovereign perception and the shifting primacy of sovereign and imperium interests in discontinuous frontiers influence colonial fortification.

Schürch, Benjamin (University of Tübingen/Connecticut)

[58]

Chair

Schürch, Benjamin (University of Tübingen/Connecticut) and Nicholas Conard (University of Tübingen)

[58]

Large-Scale Analyses Show Flexible Paths of Aurignacian Lithic Production at Vogelherd Cave in Lone Valley

The Aurignacian marks the beginning of the Upper Paleolithic in southern Germany. During this time blade and bladelet production became the central focus of the stone knapping. Lithic technology of the Swabian Aurignacian is nowhere better documented than at Vogelherd. Here Riek's original excavation in 1931 and Conard's excavations in the site's backdirt (2005–2023) have produced by far the largest lithic assemblage from this technocomplex. However, diverse core typologies and views on lithic reduction make characterizations and comparisons of Aurignacian assemblages difficult. In this talk we provide an overview of multiple modes of lithic reduction documented at Vogelherd. With such a large lithic assemblage we are able to place various types of cores within a fluid system of reduction. Due to the exceptionally large number of artifacts from Vogelherd, we are able to identify important characteristics of the Swabian Aurignacian that were previously considered marginal features. To gain insights into the *chaînes opératoires* from Vogelherd, we analyze the cores, tools, all debitage products, raw material units, and hundreds of lithic refits. This enables us to look beyond typological categories and to gain a much more comprehensive understanding of reduction processes, which should facilitate regional and interregional comparative analyses.

Schurr, Mark (University of Notre Dame), Terrance Martin (Illinois State Museum) and Madeleine McLeester (Dartmouth College)

[130]

Reconstructing Vanished Midwestern Wetlands: Insights from the Aquatic Fauna of the Middle Grant Creek Site

The same glacial processes that produced Lake Michigan in midwestern North America also produced numerous wetlands of many types at the southern end of the lake. A diverse wetland matrix of smaller lakes, rivers, streams, ponds, marshes, swamps, bogs, and fens was once found throughout the region. Many of these wetlands have been destroyed or altered by urban and agricultural development. Wetlands were essential to Native Americans who inhabited the area prior to European colonization. The Middle Grant Creek site, an early sixteenth-century Huber phase agricultural village, has produced abundant, diverse, and well-preserved remains of fauna from aquatic ecosystems. The faunal remains can be used to determine the types of wetlands that were present in the vicinity even if they no longer exist. They can also be compared to those from other sites in the region to understand Late Prehistoric patterns of wetland exploitation. We examine the habitat preferences of the species that were used by the inhabitants of Middle Grant Creek to

determine what types of wetlands were once present nearby and compare the past distribution of wetlands to the current wetland-impooverished landscape. Such studies are important for those who wish to understand or reestablish vanished ecosystems.

Schurr, Mark [60] see Fenner, Jack

Schurr, Mark [202] see Vazquez Fiorani, Agustina

Schwadron, Margo and Carla Hadden

[232]

Shellscape Communities of the Ten Thousand Islands, Florida

The Ten Thousand Islands of Florida contain the vestiges of massive shellscape communities constructed by fisher-hunter-gatherers. This paper explores two of the largest shellworks—Pumpkin Key and Turner River. Each community constructed over 40 massive shell midden mounds that comprise some of the most complex shell architecture worldwide. With reference to other shellwork site characteristics (temporality, shapes, sizes, and constituents), new interpretations are offered on the past histories of these two unusual sites.

Schwalenberg, Megan (New South Associates)

[72]

Engaging with NAGPRA at the Veterans Curation Program

The Veterans Curation Program (VCP) is a US Army Corps of Engineers (USACE)–funded program with a dual mission to rehabilitate USACE administered artifact and document collections and provide temporary employment and vocational training to veterans. Since its inception in 2009, the VCP has trained more than 790 veterans who have worked with collections from 25 USACE Districts. At the start of each term, veterans receive training in many anthropological topics, including NAGPRA and how it affects Indigenous communities within the United States. VCP contractor staff continue to refine the teaching of sensitive issues, like NAGPRA, to non-archaeologist veteran technicians, including incorporating Indigenous knowledge and educating them about modern and historical Tribal Nations local to each lab. Additionally, document collections related to archaeological excavations are cleaned, organized, and digitized in a standardized way, which allows the records to be accessible without having to physically view them. Through this process, over 1,800 linear inches, or 150 feet, of documents have been rehabilitated and are now searchable, not only for research purposes but also for aiding USACE and Tribal communities in the NAGPRA process.

Schwandt, Zoe (UNC-CH)

[205]

(En)Gendering Cure: An Exploration of Gender Construction at a Twentieth-Century Southern Asylum

In this paper, I explore the way gender is conjured at an early twentieth-century North Carolina Asylum through its organization of space and patients' movement in this space. I consider the way that gender is maintained, reified, and produced through archival research on the Raleigh State Asylum of North Carolina. The built landscape of the Raleigh State Asylum functioned as a medical technology for its patients and was entangled with projects of cure that sought to transform patients into suitable North Carolinian subjects. In many cases, as this research demonstrates, this entailed a gendered transformation. I argue that the hospital's gendered landscape was an integral medical technology operationalized at the Raleigh State Asylum. This paper relies on critical archival research and offers an alternative to excavation-based investigations into materiality and meaning.

Schwandt, Zoe [38] see Colclasure, Cayla

Schwartz, Christopher [269] see Peltzer, Summer

Schwartz, Christopher [305] see Torvinen, Andrea

Schwartz, Erin (Thomas Jefferson's Poplar Forest)**[45]***Physical Trowels and Digital Teapots: Developing Accessible Toolkits for Archaeology Learners*

The COVID-19 pandemic necessitated broad shifts in the ways archaeologists excavate, analyze, and communicate with each other and the public. Although we have largely returned to in-person teaching and research, these experiences in designing and implementing new remote and hybrid modalities offer several potential solutions for making archaeology education more accessible. This poster outlines various questions explored, strategies employed, and solutions developed for undergraduate students learning archaeological laboratory analysis during the pandemic. More specifically, this work outlines the roles of technology and collaboration (even when far apart) in creating both physical and digital spaces where all are welcome and supported. While this poster highlights creative strategies developed for teaching lab methods, potential strategies for teaching and outreach outside the lab are also examined.

Schwartz, Erin [227] see Proebsting, Eric

Schwartz, Glenn (Johns Hopkins University)**[212]***Discussant***Schwartz, Soul (Indiana University) and Ryan Kennedy (Indiana University)****[199]***Comparing Multiple Methods of Fish Size Estimation Using Sheepshead Remains from New Orleans, Louisiana*

Size estimation of archaeological fishes has been employed by zooarchaeologists to address a number of topics, including past fishing methods, commodification of fishes, and overfishing. Although the development of regression formulae describing the relationship between fish length and skeletal measurements is the most common method employed by zooarchaeologists, direct comparison of archaeological fish remains to bones of modern fishes of known sizes has also been used. In this poster, we compare these two methods using modern sheepshead skeletons collected from southeast Louisiana and archaeological sheepshead remains from sites in New Orleans, Louisiana. We note relative advantages and disadvantages of each method, including the upfront time costs incurred while building regression formulae, the need that particular skeletal landmarks be present, and limitations caused by broken or pathological comparative specimens. We also present the first regression formulae for size estimation of sheepshead, which should be useful in coastal archaeological contexts throughout the Gulf of Mexico and East Coast. Ultimately, we suggest that there is no one-size-fits-all solution to size estimation, but rather that the most appropriate method for any given project should be determined by factors including project timeline, skeletal part representation, and relative fragmentation rate of fish remains at a site.

Schwarz, Kevin [110] see Chan, Evelyn

Schwarz, Kevin [228] see Crider, Andrea

Schwarz, Victoria (Michigan State University) and Emily Milton (Michigan State University)**[171]***A GIS-Based Digitization of Archaeological Field Survey Data from the Central Peruvian Andes*

Archaeological survey began in the central Peruvian Andes in the mid-1960s through the 1970s but was brought to a halt in the 1980s due to political unrest. Investigations into some of the early highland sites continued in the 2000s; however, there are still areas that have yet to be systematically surveyed. Digitization of the existing field survey data can be a means to improve the efficiency and accuracy of new archaeological investigations in central Peru. This method can help us achieve an understanding about landscape change and use over time, as well as identify new zones that have not yet been surveyed. In this regard, this poster

presents a large-scale GIS-digitization of all the available field survey data in the Junín region of the central Peruvian Andes, including sites extending across all time periods.

Schweickart, Eric (Colonial Williamsburg Foundation)

[16]

The Tomb of the Known Unknown Soldier: Identifying the Remains of Confederate Soldiers Buried near the Williamsburg Powder Magazine

In an ironic twist, while the names of the Confederate casualties of the Battle of Williamsburg have been remembered and memorialized, literally carved in stone, the physical remains of the soldiers were lost and forgotten until we accidentally exposed their burials while excavating near the Williamsburg Powder Magazine. In this presentation, I will demonstrate how Williamsburg's racial divide and the goals of the Lost Cause movement created this discontinuity and how these historical circumstances affected the goals and outcomes of our research. By combining the results of the archaeological excavation of the remains, investigations into the materiality of the artifacts affiliated with the deceased, documentary research in the National Archives, and osteological analysis of the four complete skeletons recovered from the Magazine we have taken the first steps toward reassociating these skeletal remains with their names and identities.

***Images of human remains and funerary objects will be shown in this presentation.

Schweikart, John

[329]

Chair

Schweikart, John

[329]

Beneath the Field of Battle: A Summary of Previous Archaeological Investigations at Vicksburg National Military Park
The Vicksburg National Cemetery, established in 1866, and Vicksburg National Military Park, established in 1899, were created to commemorate the 1862–1863 siege, to honor those who had fought and died here and to preserve these significant places on the very grounds on which these actions occurred. While great efforts were made to create and perpetuate a contemplative landscape rich with monuments and interpretive signage, relatively little systematic archaeological investigations have been conducted over the past century. Nevertheless, and in spite of large-scale alterations to much of the park's landscape over the past century, archival research combined with recent and ongoing archaeological investigations point to the existence of potentially significant archaeological deposits indicative precontact, historic period Native American, and colonial Spanish occupations that in many ways are foundational to what happened at this Civil War-era battlefield.

Schwendler, Rebecca (Histría Cultural Resource Consulting LLC)

[323]

Chair

Schwendler, Rebecca (Histría Cultural Resource Consulting LLC), Charles Egeland (University of North Carolina, Greensboro), Jing Deng (University of North Carolina, Greensboro), Minjeong Kim (University of North Carolina, Greensboro) and Christopher Nicholson (Arizona State University)

[323]

Network Analysis of Magdalenian (Upper Paleolithic) Perforated Disks

The Magdalenian (ca. 20,000–14,000 cal BP) of western and central Europe witnessed both a rapid expansion of Upper Paleolithic human populations after the Last Glacial Maximum and the creation and circulation of an unprecedented abundance and diversity of portable decorated items. The materials, design details, and chrono-spatial distribution of these visual displays suggest changes in the types and patterns of social

connections among hunter-forager groups as they navigated postglacial landscapes. Using similarities and differences in the decorative elements of one particularly common form of visual display—perforated disks—we employ formal network analysis to test hypotheses about Magdalenian social networks. Quantitative and graphical analyses of node-tie relationships at multiple scales reveal a complex social landscape that was influenced not only by geographical distance, topography, and local environments but also by the reinforcement of social identity through manipulations of visual displays at multiple social scales. Our results illustrate both the promise and pitfalls of using Paleolithic archaeological data for network analysis.

Scialo, Stephanie (University of Connecticut; Heritage Consultants LLC) and David Leslie (Heritage Consultants LLC; TerraSearch Geophysical LLC)
[224]

Quartz Microcores and Bladelets in Southern New England: Gulf of Maine Archaic Tradition Sites and the Rise of Quartz Technology during the Early Holocene

Sites containing Early Holocene Gulf of Maine Archaic Tradition (GMAT) components have been few and far between in the New England region. Given the lack of diagnostic tools associated with the industry and the general rise in quartz use during the Archaic period in the Northeast, these sites have often been misattributed to Late Archaic period occupations; more commonly referred to as Narrow or Small Stemmed. However, increased study and recognition of the Quartz Core and Uniface Industry, the principal suite of technology utilized at GMAT sites during the Early Archaic period in northern New England, has led to a subtle boom in identified GMAT sites throughout the region, including sites in southern New England. In fact, sites with quartz microcore and bladelet technology have been increasingly identified throughout the northeastern United States and Canada, indicating a wider technological adaptation during the Early Archaic period than originally proposed. In this presentation we discuss recently identified GMAT sites in southern New England, the potential for GMAT as a technological response to environmental change, and the further implication for the extent of this overlooked industry.

Scott, Ann [221] see Brady, James

Scott, Ann [221] see Iglesias, Christina

Scott, Becca [130] see Conolly, James

Scott, Karen [123] see DiEmma, Gabrielle

Scott, Michael (University of Oxford), Angela Trentacoste (University of Oxford), Robert Hedges (University of Oxford), Amy Styring (University of Oxford) and James McCullagh (University of Oxford)
[113]

Exploring the Potential for Detecting Dietary Metabolites from Plant Foods Using Ultra High Performance-Mass Spectrometry on Archaeological Bones of Domesticates from Forcello, Northern Italy

[WITHDRAWN]

Scott, Rachel (DePaul University), Finola O'Carroll (Blackfriary Archaeology Field School) and Laura Corrway (Blackfriary Archaeology Field School)
[22]

Reconstructing the Life Use of a Medieval Friary from Its Fragmentary Remains

The Dominican friary in Trim, Co. Meath, Ireland, was established in AD 1263 by Geoffrey de Geneville, then Lord of Trim. Located just outside the town wall, the Black Friary was an important institution during the late

medieval period, as indicated by its large size and double cloister as well as its use for ecclesiastical and governmental meetings. By 1540, as part of the dissolution of the monasteries, the commissioners of King Henry VIII suppressed the friary and sold its land, buildings, and goods. The buildings then gradually fell into disrepair before being demolished in the 1750s. Unlike similar sites in Ireland, the Black Friary was never significantly reoccupied or built over, providing a unique opportunity to investigate the growth and decline of a medieval friary over the course of five centuries. Ongoing archaeological excavations since 2010 have recovered evidence of building works throughout the use-life of the friary. The primary medieval occupation saw the addition of a south aisle to the church, refurbishment of the east window above the altar, and the extension of the chapter house. Later, following the dissolution, modification of the buildings in the west range document partial reuse of the site for farming activities.

Scullin, Dianne

[146]

Discussant

Seabrook, Melina [85] see Monroe, Shayla

Sealy, Judith (University of Cape Town), Petrus le Roux (University of Cape Town), Maximilian Spies (University of Cape Town) and Kerry Gray (University of Cape Town)

[236]

Strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) Isoscapes for Mobility and Migration: The Way Forward

Applications of $^{87}\text{Sr}/^{86}\text{Sr}$ in studies of paleomobility and migration have developed in an interdisciplinary space at the intersection between archaeology, geochemistry, and ecology. The approaches taken have depended on the home discipline of the lead researchers. Differences in approach and criteria in the many, very diverse studies now in the literature are confusing, and a barrier to potential new users. Three main areas of concern are (1) sampling; i.e., developing datasets for building isoscapes; (2) mapping and modeling, or how best to synthesize $^{87}\text{Sr}/^{86}\text{Sr}$ values and associated information into isoscapes; and (3) interpretation, or the use of isoscapes for provenance. This talk will offer some comments on challenges such as: Which approaches are likely to be best for different applications? What are the costs and benefits of different options? How do we handle uncertainties? Some of these points may be applicable also to other isotope systems, such as lead and neodymium.

Sealy, Judith [55] see Dewar, Genevieve

Searcy, Michael (Brigham Young University New World Archaeological Foundation)

[313]

Discussant

Sears, Erin (Smithsonian Institution)

[221]

Sacred Landscape and Ceramic Ritual Production in Cobán, Guatemala

An accidental discovery by bulldozer of an ancient Maya ceramic workshop has created a post-civil war chapter of exploration in central Alta Verapaz. The site of Aragón lies at the base of a mountain, near the headwaters of what becomes the Usumacinta drainage. Its Late Classic-Terminal figural contents represent a range of ritual and daily objects that are markedly different from those manufactured in communities of the lowland Petén riverine zones. This unique production zone permits new insights into aspects of ritual representation and practice.

Sedig, Jakob [106] see Punzo Díaz, José Luis

Sedlmayr, Jayc

[25]

Chair

Sedlmayr, Jayc and Martin Oliva (Moravian Museum, Anthropos Institute)

[25]

The Ontological Mammoth Body: Varieties of the Human-Mammoth Ritual Drama Mediated by Cultural Interactions with Mammoth Remains in Pavlovian Moravia and Mezinian Ukraine

Ethnohistoric sources show hunters burnt the bones of prey or hung them on trees, heaped them on piles, deposited them in bogs, etc., in order to propitiate nature spirits such as the “Master of Animals” for game resurrection and renewal. Animals were not mere prey but partners to hunters. Animal body parts could be used to attain spiritual potency and even increase human fertility. In the highly cooperative society of hunters, everyday life included festivities and rituals, an important part of which might have been the deposition of as wide a sample of bones from the kill as possible. Nevertheless, archaeozoologists persevere in ignoring these facts. However, we see the Mammoth Steppe of the Moravian Pavlovian (32–22 ky BP) and Ukrainian Mezinian (20–13 ky BP) as a “shamanistic” landscape for the ritual drama of the hunt and ontological interplay between humans and mammoths with evidence for religious beliefs and acts in a vast array of material cultural correlates; many of these in the form of modified mammoth remains, including monumental architecture, that comprise one of our species’ most ancient, elaborate religious complexes, and serve as a model for the interpretation and reconstruction of religious doctrines and ritual in archaeological societies.

Sedlmayr, Jayc [25] see Collard, Mark

Sedlmayr, Jayc [25] see McCauley, Brea

Sedov, Sergey [240] see Cabadas Báez, Héctor Victor

Seefeld, Nicolaus (University of Bonn)

[275]

The Sociopolitical Impacts of Agricultural Intensification and Water Management in Classic Maya Society

A central issue for our understanding of Classic Maya society is how it managed to flourish despite scarce water resources, and limited access to agriculturally productive soils. More recent investigations confirmed that the adaptation strategies, which the prehispanic Maya developed to overcome these obstructions, were less defined by cultural traditions than by the requirements of the local environment. Consequently, the agricultural and hydraulic features of the Maya Lowlands are remarkably well adjusted to the different geographic regions. These highly customized and carefully constructed installations indicate large amounts of labor input and high levels of experience, which suggest and a long-standing tradition in the development of these features. The presentation shall provide an overview of the landscape history and the different geological and climatic areas of the Maya Lowlands and explain the development and functionality of the adaptation strategies and their interaction with the local settlement landscape. Since the sociopolitical effects of these landscape transformations remain poorly understood, this lecture will explore how and to which extent (intensified) agriculture and water management influenced a process of social stratification and demonstrate the economic and sociopolitical relevance of prehispanic adaptation strategies during the formation, florescence and collapse of Classic Maya society.

Seefeld, Nicolaus [31] see Brewer, Jeffrey

Seefeld, Nicolaus [31] see Carr, Christopher

Seefeld, Nicolaus [31] see Dunning, Nicholas

Seetah, Krish (Stanford University)**[245]***Chair***Seetah, Krish (Stanford University)****[245]***Ecological and Cultural Impacts of Colonialism on Mauritius*

The colonization of Mauritius exemplifies the role played by humans in altering the ecosystems of remote islands. Previously uninhabited, it now has the highest population density of any African nation, and despite scant natural resources, also has one of the continent's highest GDPs. Mauritius serves as an ideal case study for islands where the chronology is well attested historically, but remains poorly assessed archaeologically, specifically within the context of demographic and cultural flux. This presentation outlines the rate and scale of ecological change, modeled against prevailing demographic and imperial transitions: once colonized, how did different culture groups contribute to environmental modifications? Through archaeological and anthropological studies conducted in Mauritius, this presentation reveals the different phases of colonization and transformation that led to the current multicultural populace and environmental degradation that typifies Mauritius.

Seetah, Krish [245] see Sikora, Martin

Sefton, Jahleen, Ian Freestone (University College London) and Laura Adlington (University College London)**[170]***Interpreting Recycling in the Roman Glass from Colchester*

By the time of the Roman invasion of Britain in AD 43, the Roman glass industry had reached its height, largely due to the development of a glass-blowing technique which allowed glass vessels to be produced in greater quantities and variety of shapes contributing to its wider use. Antimony, a decolorizer used in the glass industry of Egypt, produced the most brilliant colorless glass in the empire. However, over the Roman period the use of antimony gradually diminished until it was completely replaced by manganese (an alternative decolorizer) in the fourth century AD. Along with the development of glass was the industry of recycling, which produced new glass objects from discarded material. Antimony and manganese concentrations of 101 samples from sites within Colchester dating to the Roman period were analyzed. Using the Olympus Delta pXRF, one can measure quantities of antimony and manganese in transparent naturally colored and decolorized colorless glass. These measurements reveal if concentrations indicate a deliberate separation of antimony-decolorized glass and manganese-decolorized glass in the recycling process. By understanding the various compositional groups and comparing them against the typological groups and dated context, a more detailed picture of the recycling behaviors and socioeconomy of the area has emerged.

Segura Galván, Miriam (Conservator)**[267]***Método replicable de un sistema de capas de sacrificio para el patrimonio cultural arqueológico***[WITHDRAWN]**

Šegvic, Branimir [255] see Doyle, Emily

Seidemann, Ryan (Louisiana Department of Justice) and Christine Halling (Louisiana Department of Justice)**[131]***Navigating Neutrality and Bureaucracy among Property Owners and Descendant Communities as Government Representatives in Matters of Cemeteries and Human Remains in Louisiana's River Parishes*

Louisiana's River Parishes between Baton Rouge and New Orleans, alternately known as "the Industrial Corridor" or "Cancer Alley," has long been a place and landscape with clashing interests of industrial uses, economic development, environmental justice, and historic and archaeological preservation. This area is home to vast communities of descendants of enslaved peoples from the antebellum plantations that lined this historic highway of commerce. To and through the 1980s, the interests and concerns of descendants took a backseat to industrial and economic development, with massive international corporate plants—producers of pesticides, petroleum products, and innumerable other chemicals—being constructed on former plantations. Beginning slowly in the 1980s and reaching unrivaled heights today, communities have gained traction in bringing historic, prehistoric, and especially cemetery sites directly into the crosshairs of judicial and extrajudicial disputes with local, state, and federal governments, and corporate interests. From the perspective of governmental employees, we attempt to examine the intersection of legal issues, archaeological resources, and community interests. Recent case studies in the Louisiana legal system highlight areas intended to advance guidance and efforts of all stakeholders as relationships, however tenuous, may continue to build protections that serve the interests of the many rather than the few.

Seidemann, Ryan (Louisiana Department of Justice)

[300]

Chair

Seidemann, Ryan [300] see Halling, Christine

Seidemann, Ryan [300] see Wellons, Sovi-Mya

Seifert, Jerrod (Cardiff University), Ashley Lingle (University of York), Attila Gyucha (University of Georgia), Paul Duffy (Kiel University) and Danielle Riebe (University of North Georgia)

[141]

Multivocal Approaches to Sustainability in the Rejuvenation of the Archaeological Tell Site, Vésztő-Mágor

Too often the conservation, visualization, and management of archaeological sites are afterthoughts of excavations. Heritage preservation and presentation are only considered after the trowels leave, with site managers working within the confines of what they've been given and the public viewing what is left. Excavation decisions—whether knowingly or not—remove the agency of post-excavation site specialists, impacting site preservation, visualization, interpretation, and ultimately sustainability. The team working to reinvigorate the archaeological site of Vésztő-Mágor, Hungary, recognizes the benefits of blending interdisciplinary perceptions of value in their approach to safeguarding the site. Rather than a single archaeological narrative, the team looks to contemporaneous articulation of multiple values. Drawing insights from archaeologists, conservators, engineers, site managers, and local communities, the project aims to create a dialogue of meaningful presentation strategies for the site to ensure its preservation as a thriving center for local identity, regional congregation, and tourism. This paper discusses the Mágor Conservation and Exhibition Project, and how preservation of this unique prehistoric tell is happening "at the trowel's edge." Whereby sustainability and authenticity are embedded in the planning and execution of excavation, conservation, and visitor interpretation at the largest tell on the Great Hungarian Plain.

Seifert, Laura

[71]

Islands in the Stream: Fort Pulaski's Shifting Shorelines and Rising Groundwater

Excavations at Fort Pulaski's Workers' Village have uncovered evidence of how the fort's builders adapted to their barrier island environment and coped with hurricanes. Past fort personnel had their own version of the National Park Service's Resist-Accept-Direct Framework: resisting by constructing a breakwater, accepting by abandoning buildings, and directing through a ditch-and-dike system to drain the marshy island. Today's archaeologists also had to adapt to their barrier island environment, which is rapidly changing due to climate change. Archaeologists occasionally struggled with seeing direct evidence of hurricanes in the archaeological

record, especially while their units filled with groundwater, but the cultural adaptations to the climate and storms were evident in the stratigraphy of this anthropogenic landform and in the remaining traces of structures.

Seitsonen, Oula (University of Oulu, Finland)

[151]

Chair

Seitsonen, Oula (University of Oulu, Finland) and Markus Fjellström (Stockholm University)

[151]

Long-Term Spatio-Temporal Dynamics of Sámi Reindeer Husbandry on the Northern Shore of Europe

Reindeer hunting, reindeer husbandry, and nomadic pastoralism form a significant part of the history of Sápmi, and the whole northern Fennoscandia from the late Iron Age to modern times. Sápmi, situated on the northern shore of Europe, is the transnational homeland of Sámi people, Europe's only Indigenous group. Recent multidisciplinary studies have clarified our understandings of the development and significance of reindeer herding through time, e.g., as part of the international trade and contact networks. This presentation examines the changes in reindeer husbandry in space and time, based on the radiocarbon dates obtained from the Sámi reindeer herder sites in whole Sápmi, and assesses how these relate to the wider historical context. The Sápmi-wide chronological perspective offers a wider view on the past developments, as the previous temporal reviews have been based on regional case studies. The latest results from our multidisciplinary studies, e.g., zooarchaeological, aDNA, anthropological, and ethnoarchaeological research, are reviewed alongside the spatio-temporal analysis. The aim is to give a sweeping overview of the development of Sámi reindeer husbandry throughout Sápmi from its beginnings in the (Late) Iron Age to the twentieth century.

Seitsonen, Oula [151] see Égüez, Natalia

Seki, Yuji

[27]

Discussant

Seki, Yuji, Juan Pablo Villanueva (Universidad Nacional Mayor de San Marcos) and Daniel Morales (Universidad Nacional Mayor de San Marcos)

[161]

Emergencia de poder e interacción interregional en la sociedad del Periodo Formativo: Una perspectiva de la Sierra Norte del Perú

El objetivo de esta presentación es analizar la relación entre la sierra norte del Perú y la región ecuatoriana en el proceso de emergencia de poder del periodo Formativo peruano. En las excavaciones en el sitio Pacopampa se han recuperado varias tumbas con objetos de oro que datan de 700-600 aC. El descubrimiento de tumbas similares en el sitio Kuntur Wasi nos ha llevado a argumentar que surgieron diferencias sociales durante el periodo Formativo Tardío (800-500 aC). Para ello, se ha centrado la atención en los objetos rituales y sus materias primas, que se basan en el intercambio interregional. Conchas marinas como *Spondylus* y *Strombus*, que probablemente fueron traídos de Ecuador, eran los recursos importantes para asegurar posiciones de liderazgo. Este punto puede deducirse de la "Tumba del Sacerdote de los Pututus" descubierta el año 2022 en el sitio La Capilla ubicado cerca de Pacopampa, donde el individuo descansaba sobre 20 *Strombus* acompañado de un gran número de cuentas de concha y piedra. Dado que esta tumba es varios cientos de años más antigua que las tumbas reparatadas anteriormente, sugiere que existió una profunda conexión con la región ecuatoriana durante más tiempo del que se pensaba.

Sekiguchi, Kazuhiro (National Astronomical Observatory of Japan / NINS) and Yoshitaka Hojo (Tokai University)

[239]

Orientation of Tsukuriyama Kofun Tumulus: Examination from Lidar Survey

The Tsukuriyama Kofun in Okayama is a massive burial mound from the fifth century that spans over 350 m and ranks third-largest in Japan. The Okayama University team used lidar to survey the mound and integrated the data into arcAstroVR, a visualization software for archaeological remains and celestial bodies. The mound's scale and layout resemble the Ishizugaoka Kofun in Osaka, sharing an axis deviation of 29° from the true north. From this, it can be inferred that the two burial mounds built 154 km apart shared the same basic design, including the method of determining the axis of the mound. One suggested reason for this directional choice is the "Token" Big Dipper alignment in the fifth century. Another perspective posits that a 90°-rotation of this angle would nearly correspond to the sunrise direction during the winter solstice. Ground-penetrating radar surveys and partial excavations have unveiled a parallel alignment between the axis of the central burial structure within the rear circle and the overall mound axis. Current investigations aim to determine if the mound's placement was influenced by the "Hokushin Faith," a belief from that era centered on the North Pole of Heaven in China.

Sekiguchi, Kazuhiro [239] see Goto, Akira

Sekiguchi, Kazuhiro [239] see Sugiyama, Saburo

Selden, Robert [24] see Parish, Ryan

Seligson, Ken (California State University, Dominguez Hills)

[261]

Chair

Seligson, Ken (California State University, Dominguez Hills), Tomás Gallareta Negrón (Instituto Nacional de Antropología e Historia), Rossana May (Kaxil Kiuic, A.C.) and George Bey III (Millsaps College)

[261]

Burt Lime Production in the Eastern Puuc Region

This talk will present an overview of the Bolonchen Regional Archaeological Project's contributions to the study of Maya burnt lime production, drawing on a mix of excavation, archaeometric, and spatial data. As part of their extensive Kiuic-Labná intersect pedestrian survey, Tomás Gallareta Negrón and Rossana May Ciau identified hundreds of distinctive annular structures in the study region in the early 2000s. Vertical and horizontal excavations of a sample of these structures in the mid-2010s demonstrated that they were used as pit-kilns to produce burnt lime. Subsequent lidar flyovers of the study region in 2017 and 2022 identified hundreds more of these annular pit-kilns. Comparisons of the BRAP spatial data with those from lidar flyovers in other regions of the Maya lowlands suggest that the eastern Puuc was the epicenter of the annular pit-kiln method for burnt lime production. The high frequency of pit-kilns is likely connected with the distinctive demographic and architectural construction trajectories of the Late Classic eastern Puuc. In addition to providing an overview of pit-kiln mechanics, this talk will discuss the socioeconomic and ecological implications of burnt lime production in Classic Maya communities.

Seligson, Ken [261] see Ringle, William

Selke, Daulton [98] see McGill, Dru

Sellet, Frederic (University of Kansas), Justin Garnett (University of Kansas) and Haley Bjorklund (University of Kansas)

[282]

Replicating Stone Tools for Use in Experimental Archaeology: The Case of End Scrapers

This study evaluates the value of porcelain slip casting for the replication process of prehistoric end scrapers. The method when used in conjunction with 3D scanning and printing has already proven successful in making nearly exact replicas of prehistoric projectile points and their preforms. Many functionally identical copies can be made from a single mold (useful for building large sample sizes in experimental archaeology), and these copies can be resharpened or retooled in ways that mimic their stone counterparts. Due to the shrinkage of porcelain as it is fired, porcelain replicas cast in molds made directly from artifacts result in copies that are smaller than their originals. By digitally scaling and 3D printing a larger model and creating molds from the print, one can circumvent the shrinkage issue. Porcelain lithic replicas made by this method can be manufactured to similar dimensions of original artifacts or scaled to different sizes as desired. We applied this protocol to the creation of exact porcelain replicas of prehistoric end scrapers and tested them to see if the edges of the porcelain objects behaved similarly to the originals. The results and the potential applications of the process are presented here.

Seltzer-Rogers, Heather (Chronicle Heritage)

[108]

Excavation and Ceramic Analysis Results from a Moderately Sized, Eleventh- through Early Fourteenth-Century Pueblo (LA135004) near Taos in North-Central New Mexico

Chronicle Heritage recently excavated part of a moderately sized, multicomponent site, LA135004, in advance of development near Taos in northern New Mexico. The prehispanic component, dating AD 1050–1300, consists of at least one room block with features, extramural cooking pits, and thousands of ceramics, flaked and ground stone, and other artifacts. Chronicle Heritage excavated four units in the room block's previously disturbed midden and recovered nearly 1,000 sherds, 120 lithics, and one turquoise pendant, among others. In this poster, I summarize the excavation, present the ceramic analysis conducted, and discuss how the results improve the understanding of eleventh- through early fourteenth-century patterning for the Taos area, a time when populations aggregated into a few very large villages. In particular, I compare the midden assemblage to similar dating residential sites in the vicinity. Most contemporaneous sites, and nearly all associated data from north-central New Mexico, are from very large pueblos excavated as part of academic investigations. Consequently, LA135004 provides a complementary dataset from a small residential holdover during this period of population aggregation, demonstrating the need to reevaluate assumptions reliant on prior excavations at the large pueblos.

Seltzer-Rogers, Thatcher (Office of Archaeological Studies)

[88]

NAGPRA-Era Collections-Based Research in the Academy: Insights from Investigating Collections at Five Institutions

The passage of NAGPRA in 1990 has had a tremendous impact on archaeological investigations, museum curation practices, and active relationships with Native American communities, notably those federally recognized. Although many archaeologists fretted that NAGPRA would significantly curtail or outright distort archaeological research and interpretations, most view the outcomes as overwhelmingly positive. A less discussed change in the NAGPRA era is the shift from excavation-focused doctoral dissertation research at US universities to collections-based research, something starkly in contrast to prominent publications demonstrating peers attach a higher prestige to the former. In this talk, I present a summary of my doctoral research project during which I analyzed over a dozen site collections, analyzing ca. 80,000 ceramic artifacts, reconstructing excavation histories from field note archives, and dating 20 specimens curated by multiple institutions. I use the outcomes of my doctoral project to address how despite the existing NAGPRA-related restrictions, or already repatriated materials in some cases, these did not significantly curtail or limit. Rather, prior experience working for a tribal cultural resource agency and, separately, toward repatriation efforts informed how I approached and interpreted archaeological materials and ultimately led to more profound implications.

Seman, Spencer [50] see Dussubieux, Laure

Semanko, Amanda (University of Arizona), Richard George (University of California, Santa Barbara), Martin Welker (Arizona State Museum; University of Arizona) and Frank Ramos (New Mexico State University)

[200]

Mogollon Strontium Isotopic Baseline

Recent studies on domestic turkeys (*Meleagris gallopavo*) and exotic scarlet macaws (*Ara macao cyanoptera*) have raised new questions about how prehistoric communities in the American Southwest maintained local avian management practices, developed breeding regimes, and fostered trade networks. While strontium isotopic analysis ($^{87}\text{Sr}/^{86}\text{Sr}$) can be used to define local and nonlocal birds, the lack of localized biogenic strontium baseline studies across the region currently makes pinpointing the origins impractical. Here we present our results from a robust strontium isotope analysis that incorporates tooth enamel and bone from over 115 small mammals recovered from 30 archaeological sites in the Mogollon region. Because strontium isotopes from bone and tooth samples can be used as proxies for local geologic signatures, this dataset helps characterize strontium variability at each site. Our study defines strontium isotopic baselines for a largely understudied portion of southwest New Mexico and southeastern Arizona and identifies the likely origins of turkeys and macaws. This strontium isotopic baseline study will facilitate ongoing research through much of the Mogollon culture area and lay the foundation for future isotopic studies.

Semanko, Amanda [268] see Schollmeyer, Karen

Seminario, Linda (Heritage Consultants LLC), Brenna Pisanelli (Heritage Consultants LLC) and David Leslie (Heritage Consultants LLC; TerraSearch Geophysical)

[183]

A Preliminary Botanical Analysis of the Quinebaug Falls Site in Preston, Connecticut

During the Section 106 process, Heritage Consultants LLC, personnel identified the Quinebaug Falls Site along the Quinebaug River in Preston, Connecticut. Phase II investigations of the site yielded diagnostic cultural materials indicating the presence of Middle and Late Woodland occupations, including a Fox Creek and potential Jack's Reef component. The excavations resulted in the identification of cultural features that yielded botanical materials, as well as a radiocarbon date of 1440 ± 30 BP (1375–1296 cal BP). Middle Woodland sites are rarely preserved and recorded in archaeological literature throughout Connecticut and southern New England, in comparison to other time periods. As a result, this presentation will focus on the botanicals of the Quinebaug Falls Site and will provide a preliminary overview of the information this data adds to the archaeological record regarding Indigenous plant use during the Middle and Late Woodland periods in southern New England riverine environments.

Semon, Anna (American Museum of Natural History), Rachel Cajigas (University of Alabama), Elliot Blair (University of Alabama), Matthew Sanger (National Museum of the American Indian) and Alain Plattner (University of Alabama)

[175]

Recent Investigations at the Musgrove Shell Ring (9L12169) on St. Catherines Island, Georgia

In this poster, we present the preliminary findings on recent fieldwork at the Musgrove Shell Ring. Due to the ring's low topography and dense vegetation coverage, archaeologists did not identify the ring prior to the review of new lidar data, which showed an anomaly approximately 60 m in diameter. Fieldwork consisted of a shell density survey and multiple geophysical techniques including gradiometry, electrical resistance, ground-penetrating radar, electrical resistivity tomography, and time domain induced polarization. Additionally, limited excavations of the shell deposits and the center helped confirm a Late Archaic shell ring, making it the third on St. Catherines Island.

Seowtewa, Octavius [269] see Heitman, Carrie

Seowtewa, Octavius [88] see Huntley, Deborah

Sepúlveda, Marcela [156] see Valenzuela, Daniela

Serafin, Stanley [42] see George, Richard

Serra, Margot
[185]
Chair

Serra, Margot and Amandine Flammang (Université libre de Bruxelles)
[185]

Violence and Selected Funerary Treatment: Insights from a Collective Open Tomb of the Upper Nepeña Drainage, Peru (AD 1300–1500)

The recent PARAMa project undertook the excavation of several open sepulcher funerary contexts in the Upper Nepeña Drainage, among which two structures were thoroughly excavated. Their content, predominantly skeletonized and partially mummified human remains, were analyzed, representing the first systematic bioarchaeological study in the region. Here, the authors will discuss the results of this seminal study, focusing on the special case of Intirumi, a communal tomb of the *machay* (rockshelter) type. The context dates to the second part of the Late Intermediate period (AD 1300–1500). In addition to being characterized by a specific funerary selection, the commingled skeletal assemblage recovered shows an exceptionally high rate of lethal and sublethal cranial trauma (92.3%). The integration of archaeological (mortuary patterns), bioarchaeological (demographic profiles), and paleopathological lines of evidence enabled the authors to reconstruct and discuss the biocultural context associated with these traumatic injuries. In turn, it helps shed light on the lived experiences of the people deposited in this tomb, including the types and patterns of interpersonal violence and warfare in the Cordillera Negra region during this period. Finally, the remains highlight the overall significance of this particular open sepulcher context within the funerary landscape.

Serra Puche, Mari Carmen (IIA Universidad Nacional Autónoma de México)
[248]

Xochitécatl-Cacaxtla: Una ciudad dos veces abandonada

El tema del abandono de las ciudades arqueológicas, se ha tratado en muchos estudios, pero en este caso la particularidad es el “retorno”, en Xochitecatl-Cacaxtla se identifican dos periodos de ocupación, el primero de 800 aC a 200 dC, y el segundo del año 650 dC al 950 dC. La causa del primer abandono fue la erupción del volcán Popocatepetl, sabemos hacia donde fueron y se establecieron, pero lo más intrigante es el porqué del regreso después de 500 años a habitar los mismos espacios habitacionales y los edificios del Centro Ceremonial. Tenemos evidencias de casas epiclásicas construidas encima de las ruinas de las del periodo formativo. Vuelven a ocupar la “ciudad” hasta el año 950 dC cuando otra erupción del Popocatepetl destruye el paisaje y nunca más “retornan”.

Serra Puche, Mari Carmen [214] see Romero Aranda, Víctor Hugo

Serrano, Javier [245] see Fregel, Rosa

Sesma, Elena (University of Kentucky)
[327]

Composting the Past for the Future in the Bahamas: A Case Study of Contemporary Reuse and Transformation of Historic Spaces

Farmers and gardeners in the Bahamas have long practiced swidden agriculture to replenish the thin soil

layers sitting atop limestone bedrock. These methods recycle the organic materials of the landscape to produce something new and generative. In similar fashion, the historical materials that dot the landscape of rural islands are recycled into new constructions that make life in rural islands like Eleuthera possible. Drawing on DeSilvey's formulation of "compostheritage" (2017), this paper considers how the abandonment and decay of organic materials and the built environment is not a definitive end to the lives and uses of historic places and objects but is part of a process of transformation wherein old things breathe new life into the living landscape of the island. The paper considers the materiality of the early nineteenth-century Millar Plantation Estate and surrounding late nineteenth-century post-emancipation settlements where stone walls once associated with the plantation are deconstructed and reappear in garden walls, road markers, cemeteries, and more. Composting materials ties the past to the present and makes it visible in daily life, but it also has a future-oriented capacity. Archaeological ethnography reveals intersections of past/present/future embedded in the historical and contemporary materiality of this place.

Sevara, Christopher [55] see Minor, Elizabeth

Sever, Tom [173] see Herndon, Kelsey

Sevestre, David (College of William and Mary), Joseph Jones (College of William and Mary), Katharine Bender (College of William and Mary), Michael Blakey (College of William and Mary) and Jack Gary (Colonial Williamsburg Foundation)

[16]

Osteological Evidence from a Civil War–Era Grave and Surgeon's Pit in Colonial Williamsburg

In this paper, we report on the study of human skeletal remains recently discovered near a powder magazine in Williamsburg, VA, the site of a mass Confederate grave. Osteological analysis of four discrete burials and additional remains recovered from a nearby surgeon's pit indicates that these individuals likely served as soldiers. The four individuals were identified as males ranging in age from the mid-teens to the mid-thirties. One individual exhibits an extreme degree of robusticity while two others present with gunshot wounds. Our findings are consistent with documentary accounts of medical knowledge and practices of the day. For example, the lack of "false starts" and small size of the "terminal snaps" observed for amputated leg bones recovered from the surgeon's pit indicates a high level of technical expertise. Additionally, the cutting of healthy bone (evidenced by lack of periosteal reaction) suggests that amputation occurred relatively quickly following a diagnosis of infection so as to avoid its spread throughout the body. These findings and the results of isotopic analysis will inform the proper and respectful reburial of these individuals while also contributing to an expanding social bioarchaeology of violence. ***This presentation will include images of human remains.

Sevestre, David [16] see Bender, Katharine

Seymour, Brian and Jon Simon Suarez (US Army Corps of Engineers)

[175]

Navigating Uncharted Waters: Staying Up-to-Date with New Tools and Best Practices for Underwater Archaeological Survey

This poster highlights surveys by the US Army Corps of Engineers in North Carolina's Outer Banks and Florida's Tampa Bay. These studies illustrate how large-scale surveys and novel techniques are improving our ability to identify submerged resources but are also increasing the need to develop strategies to assess the significance of potential features, in order to maintain best practices for the management of our underwater cultural heritage. In order to safely survey the dynamic, shallow shoals of the Outer Banks, the Corps employed the use of an aerial drone magnetometer. The resulting survey was able to capture data at nearly three times the speed of a boat-towed magnetometer survey, and removed the potential hazards associated with such shallow waters. Lake Edgar, beneath Tampa Bay, is a late Pleistocene/early Holocene freshwater

feature that served as the drainage basin for the various fluvial channels in the region. Surveys for multiple Tampa Bay federal projects have recorded locations of the now submerged paleo lakeshore, thus potentially adding to our knowledge about the paleolandscape of the region and precontact archaeological deposits. Though not currently impacted by the project, effective and efficient assessments of these features is a challenge that requires consideration.

Sghinolfi, Amedeo (University of Western Ontario) and Patrick Mullins (University of Pittsburgh)

[299]

Boundaries and Crossroads, Immigrants and Ancestors: Comparing the Post-Chavín Landscapes of the Moche and Virú Chaupiyungas

The centuries following the disintegration of the Chavín interaction sphere (~500/400–200/50 BCE) were experienced in myriad ways throughout the ancient Andes. In the Moche and Virú Valleys in northern Peru, the late Early Horizon (~500–200 BCE) generally saw earlier traditions of large ceremonial centers fade to be replaced by evidence for fortifications, increased social hierarchies, and a boom in regional demography. However, even these generalized patterns were unevenly distributed across and between the landscapes of the valleys themselves. Situated at the highland edge of the coastal river valleys below, the *chaupiyungas* of the Moche and Virú Valleys witnessed recognizably different trajectories despite occupying similar borderlands in neighboring valleys. In this paper we use two full-coverage survey datasets to compare the post-Chavín landscapes of the Moche and Virú Valley *chaupiyungas* and explore the many ways in which relationships between neighboring and local groups transformed during the late Early Horizon.

Sghinolfi, Amedeo [81] see Mullins, Patrick

Shaeffer, Megan [45] see Marino, Maeve

Shafizadeh, Setareh [173] see Poole, Anne

Shakour, Katie (United States Forest Service)

[46]

Using Ethnographic Skills while Excavating: Exploring the Longevity of a Community Archaeology Project in Western Ireland

Community archaeology brings people from different backgrounds together to investigate the past, and each group contributes to the project in unique ways. While many articles discuss best practices, generic, formulaic approaches do not work in the field. This poster explores the techniques that help archaeologists create community interactions that benefit communities and archaeology, as community-based research is intended to do. Since 2007, the Cultural Landscapes of the Irish Coast (CLIC) project used various methods to build relationships with communities to create long-term partnerships to ensure archaeology benefited multiple interested communities, not just scholars. Through a community-based research project case study on Inishark and Inishbofin, County Galway Ireland, islands about five miles into the Atlantic Ocean, we explore the different approaches used to interact with all the interested groups in community-based research and how to apply methods to other locations and projects.

Shanks, Jeffrey (National Park Service)

[65]

Discussant

Shanks, Jeffrey [329] see Lawrence, Dawn

Shantry, Kate (Washington State University)**[262]***The Osceola Mudflow: Dropping into the Valley and Standing Up Next to the Mountain in Southern Puget Sound*

On the Northwest Coast of North America cultural processes are intertwined with the natural environment. A collapse 5,600 years ago on the northeast slope of Mount təqʷuʔməʔ [Rainier] caused the massive Osceola Mudflow (OM) event and transformed the landscape. In Lushootseed teachings, the Changer genre of stories distinguishes between the present and the past when people and animals were indistinguishable. The research presented here aims to connect land transformations and traditional ecological knowledge through the archaeological record. Local Indigenous notions of place are tied to a mosaic of resources managed by people at various degrees and levels. The post-OM landscape has been and continues to be actively used with cultural continuity. How people used the landscape after the OM is connected to past use, however the pre-OM landscape is less visible, less understood, and underexplored. This study investigates the history of the OM through oral history, geology and the archaeological.

Shapiro, Craig (Ohio State University)**[42]***Building Resilience with Traditional Knowledge in Samoa*

Analyses of lidar datasets have allowed archaeologists to expand the study of archaeological landscapes to study extensively human-modified environments at regional scales with more advanced geospatial methods. In Sāmoa, lidar reveals networks of ditches, terraces, and other earthen- and stone-monumental architectural features that extend from the coast to the remote interior. These precolonial constructed landscapes reflect the traditional ecological knowledge of Pacific Island ancestors. This intimate understanding of adapting to variable island environments and how to engineer those settled landscapes for long-term resilience still serves Pacific communities today. In Sāmoa, these socioecological systems control flooding and consequent soil saturation, support agricultural production, and provide examples of communities building resilience through collective action. Ancestral Sāmoans not only knew how to target specific soils for agricultural production but also recognized the importance of monumental water control features to maximize agricultural production. Revitalizing such traditional ecological knowledge and land management practices may simultaneously draw further connections to related communities, promote an adaptation strategy for other indigenous island and coastal communities preparing for increasingly powerful and more frequent rainfall events due to a rapidly changing climate, and indicate how these precolonial features could be integrated into modern efforts to enhance climate-resilient food production.

Sharapov, Denis (University of Tyumen)**[23]***Im(mobile) Pastoralists of the Central Steppes? Ethnohistory vs. Archaeology*

Due to the heavy influence of sixteenth- to nineteenth-century ethnography, many researchers still consider the Late Bronze Age (LBA; 2100–1300 BC) populations of the Trans-Ural steppe/forest-steppe to be nomadic pastoralists—a situation where most or all of human population is involved in periodic movements between pastures. However, a comprehensive synthesis of data pertaining to settlement architecture, garbage accumulation rates, herd composition, osteological seasonality markers, stable isotopes, the degree of transportability of artifacts, and haymaking activities from 42 archaeological sites points to the fact that the settlements of the Sintashta, Petrovka, Alakul, and Srubno-Alakul cultural types were sedentary; i.e., occupied year-round by at least a portion of the population. This observation, among other things, indicates that the analysis of the LBA populations of the central steppes requires no special approaches that would account for community-level seasonal mobility, thereby opening up the possibilities for focusing on some of the previously understudied aspects of LBA regional demography. In addition, the above finding adds the Trans-Urals to the list of world regions where large-scale sedentism preceded crop cultivation.

Sharapov, Denis [23] see Berner, Jack

Sharp, Emily (Arizona State University), Rebecca Bria (University of Texas, San Antonio) and Erick Casanova Vásquez (PIARA Peru)

[185]

Housing the Dead, Assembling Kin: The Construction and Use of Chullpa Tombs during the Middle Horizon in the Callejón de Huaylas Valley, Peru

In the highland Andes, archaeologists often emphasize the late prehispanic era (post-1000 CE) when examining the widespread mortuary tradition of interring the deceased in aboveground tombs known as chullpas. Our understanding of this practice during the preceding centuries, however, remains limited due to the smaller geographic distribution of early chullpas. In this paper, we present findings from excavations at two Middle Horizon (700-1000 CE) archaeological sites in the Callejón de Huaylas—Hualcayán and Jecosh—to assess how local peoples adopted this funerary tradition in different communities. We discuss the material evidence for distinct chullpa-building techniques, their spatial layout and location on the landscape, the feasting and offerings found outside the structures, and the social identities of the deceased interred inside them. As monumental architecture and focal points of ritual interaction, these chullpas were impressive settings where communities of mourners gathered to venerate the dead and ask them to intercede on their behalf. Yet, our data for the use and decommissioning of chullpas points to how communities perceived chullpa tombs as much more than venues for interring and feeding the dead: they may have also considered chullpas to be social actors with personhood and agency, even kin, much like many Andean houses.

Sharp, Kayeleigh (Northern Arizona University)

[181]

Moderator

[181]

Discussant

Sharpe, Ashley (Smithsonian Tropical Research Institute)

[222]

Chair

Sharpe, Ashley (Smithsonian Tropical Research Institute), Nicole Smith-Guzmán (Smithsonian Tropical Research Institute), Luis Sánchez-Herrera (Museo Nacional de Costa Rica), Diana Carvajal Contreras (Universidad Externado de Colombia) and Ilean Isaza (Estacion Científica de Coiba-AIP)

[222]

Panama Archaeology's Paradigm Shift: A History of Cerro Juan Díaz, Its Excavations, and Ongoing Research

In the late 1980s, the Panama authorities became aware of extensive looting outside the modern city of La Villa de Los Santos. By the time archaeologists had been called to investigate, the area around the hill known locally as Cerro Juan Díaz resembled the cratered surface of the moon. Thus began a decade of intensive excavations by an international group of researchers, uncovering the history of what may have been one of the largest settlements in Pre-Columbian Panama. Occupied from 200 BCE–1600 CE and spanning some 150 ha, Cerro Juan Díaz may have been a ceremonial center, burial ground, and residential community. The exact nature of the settlement is still under investigation, as hundreds of thousands of cultural remains are still under analysis. Dozens of archaeologists were involved in the project over the years, many of whom began their careers at the site. This paper explores the history of the site's discovery and excavations, as well as recent projects and plans for the future. Most importantly, it emphasizes the significant impact Cerro Juan Díaz had, and continues to have, on our understanding of ancient life in the Isthmo-Colombian Area.

Sharpe, Ashley [222] see Cybulski, Jonathan

Sharpe, Ashley [222] see Emery, Kitty

Sharpe, Ashley [222] see Nunez-Cortes, Yajaira

Sharpe, Ashley [318] see Roa, Ian

Sharpe, Steven [303] see Clark, Bonnie

Sharratt, Nicola (Georgia State University) and Patrick Ryan Williams (Arizona State University)

[86]

Two Decades (Almost) of Regional Clay Surveys by the EAF: Successes, Challenges, and Opportunities

An early and ongoing goal of the EAF was to not only generate compositional data on archaeological artifacts but also to build comprehensive collections and elemental databases of natural materials that had potentially been used to manufacture craft objects. To date, EAF efforts to build collections of geological reference material have focused primarily on clays from Andean South America. Since 2005, EAF collaborators have undertaken numerous semi-systematic surveys of clay deposits in Peru, Bolivia, Chile, and Argentina. LA-ICP-MS analyses of clays acquired during these surveys have produced critically important compositional data, which, when used in tandem with elemental analyses of ceramics, are instrumental in comparative understandings of pottery production and circulation. We concentrate on four of these regional surveys: those undertaken in the Moquegua Valley and the Cuzco region of Peru, the Azapa Valley of Chile, and Bolivia's Department of Cochabamba. We discuss what motivated each survey, the array of scientific, artistic, and community collaborations and methods adopted, and the opportunities and challenges furnished by the distinct geological context of each survey region. We also reflect on how the elemental database of clays from each survey enhances reconstructions of regional pottery traditions and suggest protocols for future surveys.

Sharratt, Nicola [50] see Rivera I., Arturo

Sharratt, Nicola [227] see Weaver, Brendan

Shaulis, Barry [337] see Samuelsen, John

Shaw, Justine (College of the Redwoods)

[314]

Reconsidering the Terminal Classic in the Northern Lowlands: A Boom or the Start of a Bust?

After many sites in the Southern Maya Lowlands were abandoned during the major societal transformation known as the "Maya Collapse," settlements in the North grew markedly in size. In the Cochuah region of the Yucatán Peninsula, and elsewhere, some of the largest architecture ever built was constructed. More residences than had been seen before, or since, covered prior occupations and extended across terrain that, at most, had previously only been used periodically for swidden farming. While estimating population counts is problematic, artifact counts and densities similarly reflect this population "boom," long described as a cultural florescence, that was eventually followed by a seemingly puzzling crash of the Postclassic. Reconsidering these major demographic shifts in light of current migrations taking place around the world, it makes sense to not necessarily think about the Terminal Classic as a time when sites in the north thrived, but instead of as a period when society was likely strained by large numbers of people arriving from the south into a drier territory undergoing significant periodic droughts. As with refugees today, there were likely varied responses to the new arrivals.

Shawler, Avery [200] see Phillips, Amy

Shaw-Müller, Kyle (University of Toronto)

[30]

Middle Horizon Residence and Production at Huaca Colorada: Sectors A and C in Comparative Perspective

Since excavations began at the Late Moche and Middle Horizon ceremonial center of Huaca Colorada (ca.

750–920 CE) in 2009, its expansive residential and production zones have attracted much attention for their ephemeral architecture. Largely located in the windblown sand of Sectors A and C, these structures have been interpreted as encampments where pilgrims from the coast and highlands feasted and crafted a wide range of items from copper alloys, textiles, ceramics, and maybe other materials. However, permanent architecture was also unearthed alongside these encampments, and recent excavations have revealed that many of these large structures undergird the informal residences. Based on stratigraphic data, new chronological models, and statistical analyses of cultural remains, I present sequences of architecture and activity areas in Sectors A and C of Huaca Colorada. I also briefly compare these results to data from other Middle Horizon, North Coast settlements (urban and nonurban) to discern whether Huaca Colorada's residential areas contained rooms and features typical of the region's houses and whether craft production areas were spatially distinct from general domestic activities and, if so, when.

Shedes, Eiryn (University at Albany, SUNY)

[99]

The Privilege of Memory: Segregation within a Plural Long Island Cemetery

The legacy of memory, and who is entitled to it, is an important conversation within post-Contact archaeology. This research examines the local narrative of segregation within Amityville Cemetery, located in the demographically separated Amityville, New York. While White individuals predominately live in the Village of Amityville, the hamlet of North Amityville consists of a majority non-White citizens who claim heritage from enslaved and Indigenous peoples. The two groups' shared cemetery offers a case study of how segregation impacts contemporary settings, with local informants indicating the front of the cemetery was reserved for the White members of the Village of Amityville and the rear portion for the non-White inhabitants of North Amityville. Utilizing a grave marker survey and reviewing historical documents, this research illustrates not only historic racial segregation, but also modern economic segregation, permeated through stratified burial costs and maintenance fees. The findings show that even today, memory serves as a privilege many are not entitled to. This poster will not include images of human remains.

Sheibley, Remi [68] see Ullinger, Jaime

Shelach-Lavi, Gideon (The Hebrew University)

[23]

Why Did Nomadic Dynasties Build Walls?

We report on the work done in Eastern Mongolia on walls, linear barriers contracted between the tenth and thirteenth centuries AD. Our project includes remote sensing, surveys, and excavations.

Sheldon, Karilyn [26] see Williams, Joey

Shelley, Daniel [127] see Lopez, Adolfo

Shelley, Nathan (Texas A&M), Kelly Graf (University of Kansas), Julie Esdale (Colorado State University, CEMML), Ted Goebel (University of Kansas) and Bryan Hockett (Bureau of Land Management)

[61]

Intrasite Spatial Analysis of the 13,800-Year-Old Component at Shég' Xdaltth'i', Central Alaska

Shég' Xdaltth'i' is an archaeological site (FAI-2043) located about 30 miles south of Fairbanks, Alaska, in the Tanana Flats. Results of archaeological testing and excavations between 2013 and 2022 identified three distinct archaeological components, components 1, 2, and 3, dating to about 13,800 cal BP, 12,700 cal BP, and

5000 cal BP, respectively. While excavating a 25 m² block, approximately 60,000 pieces of archaeological materials were collected in situ with three-point provenience, and most of these come from component I. This paper will discuss the spatial patterning of lithic technological material, radiocarbon dates, charcoal, and fauna material that has been identified at Shég' Xdaltth'í', focusing on component I. We will use spatial analyses, modeling, and qualitative observations to demonstrate different activity areas in component I and to test the discrete nature of all three archaeological components at the site.

Shen, Dewei (City University of Hong Kong)

[62]

Suburban Space Transformed: Investigating Chu Capital's Southern Suburbs before and after Conquests

Research on ancient city sites in Chinese archaeology tends to focus on remains within the city walls, while paying limited attention to the city periphery as a distinct and research-worthy spatial unit. The present paper challenges this prevailing approach by investigating the southern suburban area of the Chu capital in South China. It explores the complex relationship between this suburban space and the urban core to which it was connected. Notably, following events of monumental conquests of the region during the third century BCE, settlements in the southern suburbs underwent restructuring and became the western suburbs of the newly established Nan Commandery under the Qin and early Han empires. Overall, this study aims to offer a fresh perspective that enriches our understanding of the nuanced trajectory of early (sub)urbanization in China.

Shen, Jie (Stanford Archaeology Center)

[19]

The Dynamic World of Ritual: Oracle Bone Divination Practices in East Asia

Oracle bone divination, an ancient East Asian practice for predicting the future, originated in northwestern China during the middle Neolithic period (5000–3000 BCE) and ultimately became a prominent ritual during the late Neolithic and early Bronze Age. Its influence reached the Korean Peninsula and Japanese archipelago around 500 BC, potentially via terrestrial and maritime routes. This divination method significantly shaped the cultures and belief systems of ancient East Asian societies. Long-distance transmission prompted technological and cultural adaptations, revolutionizing religious beliefs and divination practices. Simultaneously, the collapse of ritual traditions and the establishment of new authorities, on the other hand, were miniatures of community politics. The way diviners practice divination as well as their control of related knowledge play an essential role in the emergence of early East Asian states.

Shennan, Stephen

[308]

The COREX Project: Explaining Patterns of Genetic and Cultural Diversity in Prehistoric Europe

This six-year international interdisciplinary project funded by the European Research Council (2021–2027) is bringing together the increasing quantity of genomic data available for prehistoric Europe and related macroscale archaeological data with the aim of exploring how small-scale processes generate large-scale patterns in genetic and cultural data, and how the two interact. The archaeological core of the project is the BIAD relational database. It currently includes space-time referenced datasets of radiocarbon dates with contextual information, strontium isotope analyses, archaeobotanical and archaeofaunal data, and descriptions of the archaeological context and associations of ancient DNA results, providing links to the genomic data. The space-time referencing also enables links to pollen data in the European Pollen Database. BIAD provides a curated dataset with source references, not a data repository, which can be accessed directly in R to carry out analysis. The talk will outline BIAD and some of the challenges it has had to overcome and present some results of initial analyses.

Shepardson, Britton [18] see McCoy, Mark

Shepperson, Mary [169] see Richardson, Sarah

Sheptak, Rus (University of California, Berkeley) and Rosemary Joyce (University of California, Berkeley)
[132]

Anticipating Ruptures: Living with Uncertainty and Undertaking Repair

Drawing on archaeological research on the longue durée of ancestral Lenca society in Honduras, we argue that centuries of resilience provided the tools people needed to understand and respond to periodic interruptions in the normal progress of seasons, lives, and relationships, “failures” of specific forms of social relations most dramatically visible as societal collapse and conquest. We relate this history to Indigenous ontologies in which relations between humans and other forces are in need of constant maintenance—repair—a philosophy that imagines and expects disruption, breaks, and even violence. We log evidence that communities in the ancestral Lenca area dealt with repeated uncontrollable events—extreme flooding, unpredictable impacts of volcanic ash eruptions, and agricultural failures—that provided them with a pragmatic and ritualized set of tools for confronting disasters. We examine changes in ritual action that suggest shifts in underlying philosophies of engagement with the landscape, in particular with the celestial realm, that emerge during the “collapse” of hierarchical social life beginning ca. AD 900–1100, and adjustments made in the face of the most visible catastrophe in Lenca history, the sixteenth-century colonization of the region, arguing that persistence in place resulted from overcoming failures in existing social routines by “repair.”

Sheridan, Kelton (University of Texas, Austin)
[38]

Archaeology and Community Engagement at Mission Espada, San Antonio TX

This paper presents the findings from two seasons of fieldwork at Mission Espada in San Antonio as well as preliminary results from comparative analysis of the living quarters of the priests and Indigenous living quarters at the mission in the eighteenth century. This comparison is part of a larger multiscale project that examines the lived experiences of Indigenous neophytes at Mission Espada and its associated ranch, Rancho de las Cabras. More broadly, and perhaps more importantly, this project engages with local Indigenous descendant communities in the San Antonio area. Through working with local community members, I have gained better understanding of how sites of such historical significance, like Mission Espada which is both a National Park Service site and World Heritage site in addition to being a fully functional Catholic church, both impact and are impacted by these contemporary communities.

Sheridan, Susan (University of Notre Dame)
[211]

Chair

Sheridan, Susan [211] see Chisdock, Cecelia

Sheridan, Susan [68] see Chorek, Sophie

Sheridan, Susan [324] see Johnston, Julia

Sheridan, Susan [211] see Porter, Keri

Sheridan, Thomas [88] see Hoerig, Karl

Sherman, Allison (University of Louisville) and Aaron Comstock (University of Louisville)
[200]

Testing a Possible Feasting Context at an Early Fort Ancient Village: A Zooarchaeological Analysis from the Turpin Site in Southwest Ohio

The Turpin site (33Ha19) reflects the remains of an early Fort Ancient (ca. AD 1000–1300) village located near the confluence of the Little Miami and Ohio Rivers on the east side of modern-day Cincinnati, Ohio. Recent excavations at Turpin revealed evidence of habitation, midden, and possible special purpose contexts. One large pit (Feature 100) dated between cal AD 1223–1276 contained a notably high concentration of artifacts, including the remnants of decorated shell tempered vessels, mussel shells, adornments, and the remains of a variety of animals. The density and nature of these deposits led to an initial interpretation that Feature 100 contains the remains of a feasting event. This project has two objectives focused on examining this hypothesis using animal remains. First, a zooarchaeological analysis is conducted using the Feature 100 assemblage to characterize the species deposited here. Then, this assemblage is compared to an equivalent sample from a contemporaneous midden context to determine whether Feature 100 reflects the secondary deposition of feasting debris or if it is just a larger pit used for everyday disposal. This comparison provides insight into Fort Ancient subsistence practices and has the potential to reveal elements of feasting in an early agricultural village.

Sherman, Clark [127] see Pestle, William

Sherman, Simon (University of Memphis), Ryan Parish (University of Memphis) and Diana Greenlee (Poverty Point World Heritage Site)
[24]

Characterizing Lithic Networks during the Archaic Period in the Lower Mississippi River Valley

This research investigates temporal patterns of toolstone acquisition and utilization during the Archaic period in the Lower Mississippi Valley region. Chert assemblages from Middle and Late Archaic, including Poverty Point, sites are analyzed. Whereas Late Archaic and Poverty Point assemblages are known for their diverse lithic materials, Middle Archaic chipped stone assemblages are thought to be predominantly, if not exclusively, comprised of local cherts. The goal is to pinpoint the source locations of these materials and explore whether the utilization of nonlocal toolstones represents a unique Late Archaic/Poverty Point phenomenon or is a continuation of long-standing traditions in the region's prehistory. Nondestructive Visible/Near-Infrared (VNIR) and Fourier-transform infrared (FTIR) reflectance spectroscopy and machine-learning algorithms are employed to examine the chipped stone artifacts. We conclude that both nonlocal and local raw materials are present in all these Archaic assemblages and represent the same reduction stages, regardless of their distance from the source.

Sherwood, Sarah (Tennessee Valley Archaeological Research)
[24]

Macro and Micro Floor Stratigraphy from Poverty Point Ridge 2 Northwest

Poverty Point's concentric ridges have long been assumed to be residential areas despite an absence of archaeological evidence for houses. In 1991, a field school excavation was initiated based on a core that suggested a possible clay floor buried ~60 cm below the surface. Sixteen 2 × 2 units were opened, but most were not completed, and three of the more informative units lay open for months following the field school. Unfortunately, no final report was produced and many of the records and artifacts are now missing, making it impossible to evaluate the outcome of the excavation. Diana Greenlee recently led a project to reopen two of the completed units to uncover and analyze the ridge stratigraphy preserved in the old unit profiles. In this paper I describe the stratigraphy and micromorphological evidence for constructed and used floors.

Sherwood, Sarah (Tennessee Valley Archaeological Research)
[125]

Discussant

Shevnina, Irina [23] see Berner, Jack

Sheyhing, Nicola [184] see D'Aprix, Michael

Shi, Zi [51] see Fu, Yue

Shield Chief Gover, Carlton (University of Kansas)
[65]

Discussant

Shield Chief Gover, Carlton [219] see Robinson, Erick

Shields, Ellie [268] see Carmody, Stephen

Shimada, Izumi (Southern Illinois University), Ken-ichi Shinoda (National Museum of Nature and Science of Japan) and Hideaki Kanzawa-Kiriyama (National Museum of Nature and Science of Japan)

[53]

Sicán Politics and Population: Nuclear Genomic Perspective

Why are there clustered and dispersed Middle Sicán (900–1100 CE) monumental mounds in the Lambayeque region of northern coastal Peru? What do these mounds reveal about Sicán politics and demography? As one investigative avenue to answer these questions, DNA was extracted from 15 human burials excavated at three mounds of the Sicán capital: Ventanas, Loro, and Lercanlech. It was analyzed using a next-generation sequencer. The entire mtDNA sequences for one specimen each from Ventanas and Lercanlech and the mtDNA haplogroups were identified as A2 and C1, respectively. These haplogroups are unique to indigenous peoples of the Americas. Nuclear genome analysis was possible for the young adult woman from Lercanlech. SNP data was combined with the data from both modern and ancient South Americans, and PCA was performed to clarify the genetic characteristics of this person. Compared to other open-source New World population data, this individual is positioned within those from South America. Indigenous Andeans are known to have regionally distinct genetic characteristics since ancient times. Further analysis may reveal related regional populations. We discuss how the Lercanlech person relates to the modern and ancient South American regional populations and cultural inferences that can be drawn.

Shimada, Izumi (Southern Illinois University)

[76]

Discussant

Shimada, Izumi [212] see Klaus, Haagen

Shinoda, Ken-ichi [53] see Shimada, Izumi

Shirar, Scott [200] see Elder, Jason

Shiratori, Yuko (Kyoto University of Foreign Studies)

[110]

Chair

Shiratori, Yuko (Kyoto University of Foreign Studies), Brent Woodfill (Winthrop University), Josuhé Lozada (Instituto Nacional de Antropología e Historia), Rubén Núñez Ocampo (Universidad Autónoma de Yucatán) and Socorro Jiménez Álvarez (Universidad Autónoma de Yucatán)

[230]

Locating Sak B'alam: Preliminary Research on the Last City of the Lakandon Ch'ol

According to the ethnohistorical sources, the Lakandon Ch'ol managed to maintain their independence from Spanish colonialism for over a century somewhere in the forest, after the Spanish seizure of their capital in 1586. They founded a new center called Sak B'alam, which was finally conquered by the Spaniards in 1695. Sak B'alam was renamed as Nuestra Señora de los Dolores but abandoned in 1721. After the abandonment, the location of Sak B'alam has been lost to date. Although archaeologists and historians have long attempted to locate Sak B'alam in Selva Lacandon, Chiapas, there is little written information for the location of Nuestra Señora de los Dolores in the Spanish documents. As part of a new research project focused on the historical and archaeological sites related to salt production in the interior Chiapas by Proyecto Arqueológico Sak B'alam, this paper presents results of preliminary research that employs lidar reconnaissance and surveys to locate potential Sak B'alam. The initial survey explored the area by test-pitting excavations in 2023. Results have begun to reveal some occupations in the preconquest time period.

Shirilla, Emily (University of Illinois, Urbana-Champaign)

[267]

Not-So-Set in Stone: An Investigation of Rock Art Digitization Methods and Scale of Applicability

Around the world, rock art sites present significant preservation challenges due to their vulnerability to deterioration from natural weathering as well as human impacts. Various forms of digital recordation are frequently presented as a means to preserve rock art images at various sites. The goal is to preserve them as they are before they disappear entirely. While digital documentation methods (e.g., lidar, photogrammetry, DStretch) can be effective in many cases, these technologies may not always be the best or only solution when situated within systems of cultural values and traditional knowledge of affiliated descendant communities. This extended literature review summarizes and theorizes contemporary uses of digital rock art preservation methods, including their effectiveness and impacts on site conditions. In doing so, this work investigates the plausibility of broad-scale application of digital preservation technologies for known rock art sites across the United States. I also explore where digital documentation has been done in collaboration with affiliated descendant communities and public response in these cases. I emphasize the importance of community engagement and the intertwining of archaeological and Indigenous cultural knowledge in pursuit of effective heritage preservation protocols.

Shiroukhov, Roman [91] see French, Katherine

Shmidt, Zoë (UCSC Human Paleogenomics), Kalina Kassadjikova (UCSC Human Paleogenomics) and Lars Fehren-Schmitz (UCSC Human Paleogenomics)

[70]

Optimization of a Minimally Invasive DNA Extraction Protocol for Teeth

Ancient DNA extraction protocols are inherently destructive and, therefore, are often controversial and problematic. For some communities, destructive processing of human remains could be perceived as a desecration of ancestors. For laboratory scientists, the destruction of samples limits the ability to replicate results. Harney et al. (2021) present a minimally destructive protocol for extracting DNA from human remains that relies on collecting DNA from the cementum of the tooth root, leaving the sample structurally intact with only minimal discoloration in most samples. However, since the cementum is the outermost layer of the root, it is prone to high levels of exogenous contamination, which significantly increases sequencing costs and decreases sequencing data quality. This study explores a potential method to optimize the Harney et al. minimally destructive protocol by adding an additional lysis buffer exchange step prior to incubation.

We tested multiple time intervals for additional buffer exchange and compared resulting library quality statistics (e.g., endogenous content, fragment length, contamination estimates). While the success of protocols always depends on sample preservation quality, the results indicate that an additional buffer exchange step has the potential to optimize DNA yields and quality from ancient and historic tooth samples.

Shoda, Shinya (Nara National Research Institute for Cultural Properties) and Natsuki Murakami (Nara National Research Institute for Cultural Properties)

[179]

Prehistoric Millet Cuisine: Diversity across Eurasia

Broomcorn millet (*Panicum miliaceum*) was first domesticated in northern China and spread both to east and to west during the mid-Holocene. Recent developments in biomolecular analytical techniques have enabled archaeologists to investigate prehistoric millet cuisines by examining the organic residues absorbed by the pottery. While the detection of miliacin, which is considered as the biomarker of broomcorn millet grains, in the pottery itself, and in charred deposits on the inner walls (foodcrusts), provides direct evidence of millet cooking using pottery, compound-specific carbon isotope analysis on the same extracts also detects other ingredients mixed with the millet, such as animal fats or dairy products. By doing so, this paper highlights the clear regional difference in millet cuisine in Bronze Age–Iron Age Eurasia, from the east in Japan and Korea, and west in Kazakhstan.

Shoda, Shinya (Nara National Research Institute for Cultural Properties)

[179]

Chair

Shotten, Heather [150] see Norton, Holly

Shriver-Rice, Meryl (University of Miami)

[312]

Chair

Shriver-Rice, Meryl (University of Miami), Sara Ayers-Rigsby (Florida Public Archaeology Network), Dave Scheidecker (Seminole Tribe of Florida Historic Preservation Office) and Karen Backe (University of Miami)

[312]

Collaborative Decolonial Approaches to Narrative in the Coastal Heritage at Risk Taskforce

Florida stands to lose more recorded sites to sea-level rise than any other state in the region, with nearly 4,000 estimated to be lost to a 1 m rise. For many of these heritage sites, untold stories of Florida history that are currently missing from the public record will also fade into obscurity as destruction occurs due to sea-level rise. Many of these stories are of marginalized groups who encountered violence from the start of Florida state history, and who often had to flee their communities or were forcibly removed by city planners or state military. These sites include the stories of the Underground “Saltwater” Railroad, and the forced removal of Indigenous people to internment camps on the west coast of Florida. The Coastal Heritage at Risk Task Force (CHART) team is a partnership of public, private, academic, and government entities. In this paper, our team will discuss collaborative decolonial approaches to narrative development working with Seminole THPO and the National Museum of the Bahamas. CHART’s aim is to create visibility of at-risk coastal heritage sites and their untold stories in Florida for secondary education classrooms and the public, while also assessing site risk for future adaptation strategies.

Shugar, Aaron [255] see Schortman, Edward

Shukman, Saul [126] see Pargeter, Justin

Sieczkowska, Dominika (Center for Andean Studies, University of Warsaw), Bartłomiej Cmielewski (Wrocław University of Science and Technology) and Jose Bastante (National Archaeological Park of Machu Picchu)

[242]

Inca Hydrodynamics at the Chachabamba Archaeological Site (Machu Picchu National Archaeological Park, Peru)

The Chachabamba archaeological site in the Machu Picchu National Archaeological Park contains a unique water complex erected by the Incas. Based on archaeological investigations, it has been established that the function of this water complex was strictly ceremonial. The necessity to control water flow in an architectural context is often associated with the need to apply water in a spiritual context. Moreover, hydrodynamic studies of the water supply canals have verified the previous ritual-oriented findings. Due to the complex characteristics of the site, which is overgrown by dense vegetation, we employed a volumetric analysis technique not previously applied in the region. 3D documentation techniques based on lidar and 3D scanning were used to produce hydrodynamic analyses of the site, which facilitated the preparation of models that are key to understanding the function of the entire water system. As there are many potential archaeological sites within Machu Picchu Park where this analytical method can be developed, the presentation aims to share the methodology used and discuss its possibilities and limitations. The research was carried out as part of a collaboration between the University of Warsaw's Center for Andean Studies and the Peruvian Ministry of Culture at Machu Picchu National Archaeological Park.

Sieg, Lauren (National Museum of the American Indian)

[39]

Discussant

Siegel, Peter, and Benoît Bérard (Université de Antilles Pôle Martinique)

[257]

Archaeology by Experiment, Replicating the Past, and Education: The Classroom and the Waters of the Lesser Antilles

As most archaeologists would agree, we can never know with certainty what really happened in the past given (1) the fragmentary nature of the archaeological record and (2) the intangible aspects of human behavior that may have factored in forming the archaeological record. By integrating emic and etic perspectives we aim to build an accurate/plausible (re)construction of past human behavior and the motivations, selective pressures, and cognitive frameworks that resulted in material patterns identified archaeologically. Archaeology by experiment is one source of observations that has been used to assist in understanding the past since at least the mid-nineteenth century. Experimental archaeology is also a pedagogical exercise to include in program curricula for students to make connections between human behavior and archaeological implications. We discuss (1) an undergraduate course in experimental archaeology offered to mostly Montclair State University commuter students. Working in collaborative teams, students design, conduct, and report on experiments that are doable within the semester framework. Experiments range from lab-based tightly controlled exercises to others that approximate the messiness of the real world; and (2) a long-term public-oriented experimental program in Caribbean maritime travel, including Indigenous canoe construction and engaging the public in negotiating the waters of the Lesser Antilles.

Siegel, Peter [287] see Glaser, Vanessa

Siegel, Peter [127] see Pearsall, Deborah

Sierpe, Victor [9] see Martin, Fabiana

Sierralta Navarro, Simón (Universidad Austral de Chile), Constanza Cortés Rodríguez (Universidad Austral de Chile), Leonor Adán (Universidad Austral de Chile) and Simón Urbina (Universidad Austral de Chile)

[178]

Junius and Margaret Bird at Chiloé: A Review of the First Archaeological Work in the Northwestern Patagonian Coast
 Junius and Margaret Bird's expedition to southern Patagonia is primarily renowned for its discovery of Late Pleistocene occupations within the Magellanic steppe. However, their voyage included two lesser-known stays at the northern margin of the Patagonian archipelagos. During those periods, Junius conducted the first archaeological work at the shell middens of the insular coasts of Reloncaví Sound and Chiloé Island, which he believed to be the birthplace of the canoe-faring societies of the southern Pacific. Perhaps surprisingly, however, his publications only briefly mentioned these sites. Therefore, if not for excerpts from Junius and Margaret's diaries and letters, those excavations and surface collections have remained relatively unknown, despite representing pioneering work in an area that wasn't studied for decades thereafter. In this work, we present results of the first study of the collections held at the American Museum of National History, along with the spatial reconstruction of the archaeological work carried out between 1935 and 1936. The collections include evidence so far unrecorded in the area, such as *Mytilus* shell tools, and a diverse set of ceramic, bone, and lithic assemblages that account for Chilean cultural history from the Middle Holocene to the Spanish colonial times.

Sierralta Navarro, Simón [77] see Urbina, Simón

Sikora, Martin (University of Copenhagen), Krish Seetah (Stanford University) and Rosa Fregel (Universidad de La Laguna)

[245]

Malaria in the African Indian Ocean Islands: Prospects and Challenges for Biomolecular Archaeology

Malaria remains one of the most devastating infectious diseases affecting human populations, with over 200 million cases and 500,000 deaths annually worldwide, most of which focused on the mainlands of sub-Saharan Africa. While malaria is an "old" disease on the mainland dating back tens of thousands of years, its history on the African islands of the Indian Ocean is thought to be much more recent, closely intertwined and impacted by human migrations. In this talk, I will discuss the prospects and challenges for biomolecular studies of the history of malaria on the African Indian Ocean islands. The focus will be the island of Mauritius, where a severe malaria epidemic in 1867 killed some 41,000 people, representing ~10% of the island's total population at the time. I will present results from a pilot paleogenomic study on human remains from the Bois Marchand Cemetery, established in 1867 due to the malaria epidemic.

Sillar, Bill [185] see Gonzalez Rodriguez, Cristian

Silliman, Stephen [134] see Balanzategui, Daniela

Sills, E. Cory (University of Texas, Tyler)

[5]

Chair

Sills, E. Cory (University of Texas, Tyler) and Heather McKillop (Louisiana State University)

[5]

Using Sediment Chemistry to Define Ancient Activities

Soil chemistry is used in the Maya area to evaluate ancient activities not readily identified through architecture and artifact assemblages. We evaluate ancient activities at Ta'ab Nuk Na salt work, one of the largest underwater sites in Paynes Creek National Park, with at least 10 wooden buildings preserved below

the sea floor. Some of the buildings are salt kitchens that have abundant briquetage from evaporating brine over fires to make salt. Our paper will report fieldwork at Ta'ab Nuk Na to collect sediment samples, results of chemical analyses, and our interpretations. We expected chemical signatures for various activities such as pottery production of salt pots, salt enrichment areas, fishing or salting fish, and temporary or permanent residences for salt workers. Comparisons of 21 chemical elements using inductively coupled plasma–atomic emission spectrometry, notably calcium (Ca), magnesium (Mg), zinc (Zn), phosphorus (P), potassium (K), and aluminum (Al) are compared among between six buildings. The results show variations in elements associated with salt production as well as differences inside and outside of buildings and a residence for the salt makers.

Sills, E. Cory [5] see Foster, Cheryl

Sills, E. Cory [295] see McKillop, Heather

Silva, Claudia [119] see Power, Ximena

Silva Carvalho, Carlos, Cameron Ashford Privette (Western Carolina University), Lauren Reinman (George Mason University), Katie Zejdlik (Western Carolina University) and Zsolt Nyárádi (Haáz Rezsó Múzeum)

[68]

Working for the Dead: The Role of Gravediggers and Their Impact on Burial Practices as Evidence in Transylvanian, Hungarian-Szekler Communities (AD 1050–1800)

Parker-Pearson's (1999) oft cited phrase, "the dead do not bury themselves," has led to decades of broad investigation surrounding the created social perception of an individual in different contexts and at different scales (family, military, celebrity). However, little research exists on the last individual to physically place the dead. Gravediggers have an extended relationship with the deceased and the mortuary landscape through initial placement as well as secondary placement when the initial grave is disturbed, as was common in medieval European cemeteries. This poster discusses the lived experience of gravediggers in medieval Europe through investigation of social expectations, folk accounts of the gravedigger experience, and bioarchaeological evidence of gravedigger actions. The Papdomb archaeological site in Transylvania, Romania (AD 1050–1800) acts as the archaeological case study and includes broad burial types (semi-disturbed graves, ossuary, grave shaft modifications) indicative of gravedigger choice and action. Correspondence analysis was run to compare burial type with age, sex, and location of each individual. The poster explores several possible interpretations ranging from the individual gravedigger's experience to community expectations in an attempt to highlight an important but overlooked step in medieval mortuary practices.

Silva Collins, Gabriel

[223]

Before the Dig: The "Archaeologizing" of Peruvian Heritage Sites Prior to Formal Research

The contemporary southeastern Peruvian towns of Chinchero and Urquillos sit atop Inka population centers and are connected by the Urquillos Valley. Now occupied by family farms and walking routes, this steep valley also hosts former Inka roads and several understudied archaeological sites that survive in various stages of integration with small agricultural plots, protection by the Peruvian Ministry of Culture, and overgrowth by local ecosystems. Three of the many small sites within the valley—known as Inkaq Mallquin, Apiypanki, and Choquekasantuy/Trapichi—present a set of case studies for the processes by which Inka archaeological sites in the Cusco area are transformed before intensive governmental action but after their recognition as potential tourist sites. In this poster presentation, I demonstrate how the potentials of the archaeology-tourism nexus in the Urquillos Valley reconstitute these sites in materially lasting ways prior to formal governmental intervention, archaeological excavation, and reconstruction. I develop this analysis from ethnographic, ecological, and architectural studies carried out during two months of residence with local Indigenous families in Chinchero. Findings from this study have actionable implications for understanding how contemporary pressures are transforming the analyzable records of archaeological sites throughout Peru.

Silverman, Danielle, William Parkinson (Field Museum of Natural History), Jamie Kelly (Field Museum of Natural History), Mitch Hendrickson (University of Illinois, Chicago) and Joe Wheeler (Forest Service)

[172]

Tallgrass Prairie Archaeological Landscapes Project: Investigating Occupational Histories within a US National Grassland through GIS

The Tallgrass Prairie Archaeological Landscapes Project (TPALP) was established to identify the dynamic settlement lifeways within the current boundaries of the Midewin National Tallgrass Prairie in Will County, Illinois. Previous CRM-based projects identified 214 sites spanning the Archaic to historic periods across 18,094 acres (73.22 km²) of this US National Grassland. Current research at the Langford-phase site 11WV1280 has consisted of a combination of Phase I survey in 2021–2022 and Phase II testing in 2023. Situated along Prairie Creek, the preliminary data recovered from this site provides new insights for developing models of human settlement, cultural transformations, and land use within the Upper Illinois River Valley region. Incorporating these results with a GIS compiling all site data recovered from Midewin, this poster presents the first long-term overview of occupation and addresses Jeske's argument that Langford settlement patterns are tied to resource exploitation associated with drier prairie/forest landscapes. The broader implications of this work provide a perspective on regional patterns of interaction during the Mississippian period.

Silvestrini, Sara [247] see Vidas, Lia

Silvia, Zachary [84] see Casana, Jesse

Simek, Jan, Jordan Schaefer (University of Tennessee, Knoxville), Alan Cressler (Atlanta, GA) and Jeremy Price (Winchester, TN)

[156]

The Geography of Precontact Native American Rock Art in the American Southeast

In recent years, a large number of precontact Native American rock art sites, including caves and open shelter localities, have been recorded in the southern Cumberland Plateau. Cave sites contain pictographs, petroglyphs, and mud glyphs. Most open sites are pictographs or petroglyphs painted or engraved into upland sandstone shelters and bluffs. The subject matter of these sites varies, but abstract symbols, geometric shapes, human figures, and animal images dominate. Chronological information is limited but indicates a long sequence of rock art production beginning 6,000 years ago. With nearly 300 proveniences currently known, southeastern rock art sites can now be examined from a geographic point of view. Using GIS, we assess the spatial relationships among the varied forms of rock art and identify patterns that may reflect shared site selection criteria, including cardinal orientation, elevation, and landform associations. We also use GIS to examine possible dimensions of variation that have a chronological basis.

Simeonoff, Sarah and Samantha Fladd (Washington State University)

[325]

Decolonizing Deposition

Archaeologists view deposition as existing at an interesting crossroads: it is both fundamental to our basic understandings of site formation and easy to dismiss as unintentional or of secondary importance. Detailed discussions occur most frequently either to explain away issues with the archaeological record (poor preservation, looting, etc.) or to highlight highly structured and deliberate occurrences (burials, layering of colored sediment, etc.). While these discussions are clearly important, a large amount of social understanding is overlooked when everything between the extremes is chalked up to casual activities, unremarkable accumulations, or “trash.” In particular, the extension of ontological categories, such as trash, can obscure the identification of important cultural patterns when applied to non-Western contexts, such as Indigenous

North America. In this paper, we discuss the ways significant depositional practices have been overlooked by archaeological classifications of fill through a case study of ancestral Sugpiaq sites on the Kodiak archipelago.

Simkins, Justin [321] see Rissolo, Dominique

Simmons, Alan (University of Nevada, Las Vegas; Desert Research Institute, Reno)

[116]

Son of a Son of a Sailor: Island Life and the Colonization of Cyprus

For years the Mediterranean islands were considered devoid of much Neolithic or earlier occupation. That no longer is the case, with Cyprus being one island where recent research has rewritten the prehistory of the Mediterranean. We now know that its colonization was not a one-time “Noah’s Ark” event, but rather that the sea was a highway instead of a barrier, resulting in multiple voyages. This means that the first explorers and permanent residents of Cyprus must have had skilled sailors in their midst to make these voyages. I have investigated these early phases at three sites from Late Epipaleolithic pygmy hippo hunters, to deer hunters, domestic herders, and farmers in the Aceramic Neolithic. These studies have been productive, notwithstanding current political issues on this divided island. The studies have contributed to our understanding of how and why people become islanders. The early colonizers likely originated from several Levantine and Anatolian locales and were skilled seafarers with the ability to transport not only people but domestic animals and other resources. These skills were passed down through the generations, ensuring continuous voyages and resulting in a unique island identity that persists today.

Simmons, John (Western Michigan University)

[153]

Up in Smoke: Dating Pipe Stem Fragments from Fort St. Joseph

Clay smoking pipes fragments proliferate archaeological sites in colonial North America. Clay pipes were in regular use, did not last for very long, and were often replaced. Pipe bowls and stems found at sites across New France not only provide evidence of daily life on the frontier, they also introduce and strengthen occupational data garnered from the archaeological and historical record. Stem fragments from Fort St. Joseph, an eighteenth-century mission, garrison, and trading post complex located in present-day Niles, Michigan, will be evaluated to reinforce the post’s occupational date range and offer additional lines of evidence to date areas and features of the site. This study aims to provide a more detailed understanding of time at the fort and the daily lives of those who participated in the smoking culture.

Simmons, Scott [251] see Stemp, W. James

Simões, Carlos (ICArEHB Universidade do Algarve), Antonio Herrera Herrera (AMBI Lab IUBO Universidad de La Laguna), Carolina Mallol (AMBI Lab IUBO Universidad de La Laguna) and Vera Aldeias (ICArEHB Universidade do Algarve)

[119]

Microstratigraphic and Biomolecular Identification of Seaweeds in the Mesolithic of Atlantic Iberia, SW Europe

Mesolithic shell mounds are prominent testaments of the prehistoric coastal adaptations along the Atlantic shores of Europe. In the Iberian Peninsula, postglacial hunter-gatherers largely turned to coastal regions and lived successfully with a broad-spectrum economy fostered by Early Holocene environmental changes. While mollusk shells are the most striking component of their foraging activities, an array of other marine resources were available, including seaweeds. In this paper, microstratigraphic investigations on Mesolithic shell mounds yielding novel evidence of seaweeds are presented. The microscopic remains of seaweeds were optically identified and associated with specific microstratigraphic layers highly rich in organic matter, burned within combustion features, and in disposal deposits. These observations suggest the processing of seaweeds as

other dietary components. To further investigate the significance of these finds, lipid biomarker techniques were applied to identify the n-alkanes and fatty acids of marine origin in the sediments from the same contexts. In parallel, an experimental program on controlled burning of current seaweed species was also carried out to tackle the lipidic burning signal in the archaeological samples. This paper discusses the significance of these invisible coastal resources as paleoenvironmental proxy, dietary component, and indirect evidence for foraging dynamics and specific fishing or harvesting techniques.

Simon, Rebecca (Colorado Department of Transportation, CDOT)

[64]

Discussant

Simoni, Eleni (University of Patras) and Olga Christakopoulou (Archaeological Service, Hellenic Ministry of Culture)

[170]

The “Cracking the Code” Project: Markers of Culture and Networks in Early Iron Age Stamna, Greece

In Stamna, Greece, ceramic art is the focal point of investigation. This research reveals questions about the symbolism on the decorated surfaces of 709 Protogeometric funerary vessels discovered in 500 graves excavated in the 1990s. Our objective is to show how different theoretical perspectives on ceramic interpretation can be explored through both qualitative and quantitative analyses, employing modern digital methods. The distribution of decorative motifs across the Aegean and the Eastern Mediterranean are mapped with GIS. Correlation and density calculations of the motifs focus on their related positions and statistical significance. A network analysis attempts to reconstruct travel routes and social connections, shedding light on both overland and overseas movements. However, successful digital applications require well-organized databases, not available when studying old excavations. In this paper, we present the challenging steps in digitizing analogue datasets. Interesting gaps are revealed in the transition from descriptive excavation diaries to fully quantifiable records. By assigning new temporal and spatial categories of our datasets we establish connections, and we test intra- and intersite similarities. Then, through GIS, we attempt to rewrite the narrative of the people who produced this material culture.

Simonsen Bendtsen, Aka

[307]

Research Fatigue in South Greenland

Western views (mindsets), practices, and methodologies have dominated all scientific enquiries, including archaeology, which is inherently colonizing because they assume that Western knowledge is superior to Indigenous knowledge (Smith 1999). Such approaches have led “scientists” to merely take knowledge from local communities without truly including or understanding them. This approach has caused what is now known as “Research Fatigue” (Way 2013). In Qaqortoq, Greenland, people are beginning to begrudge cooperating with the “scientific” outsiders who take local knowledge and never give anything back to the community. We need a shift. Adopting Indigenous and decolonizing methodologies does not only ensure inclusivity; it enriches research outcomes, providing deeper insights and holistic understandings rooted in local traditions and wisdom (O’Connor 2016). Researchers should work hand in hand with local communities, respecting their culture, language, and needs. In Kujataa (UNESCO World Heritage Site), we aim to guide researchers into involving local perspectives, crafting their methods to fit unique local contexts. By doing so, we can ensure research benefits for communities under focus and strengthen trust. In presenting this paper, we aim to share a blueprint for a more inclusive, enriched, and respectful way of conducting archaeological research.

Simpson, Diana (University of Nevada, Las Vegas)**[189]***Violence or Funerary Ritual? Performances of Life and Death in the Middle and Late Archaic Period of North Alabama*

This study takes a holistic biocultural approach to reconceptualize the forms and patterns of violence taking place at two neighboring Archaic period shell mound sites on the Tennessee River in north Alabama, Mulberry Creek (ICT27) and Little Bear Creek (ICT8). Bioarchaeological documentation was supplemented by archival records in an attempt to reconstruct identity, mortuary treatment, and site use over time. This allowed for a nuanced consideration of individual experience and community norms. Ultimately it is argued that patterns of trauma and mortuary practice in the Middle and Late Archaic periods indicate variable identities for victims and perpetrators of violence, as well as specialized rituals surrounding postmortem alteration and burial of such individuals within these communities. This indicates that inflicted injury likely had diverse intentions and perceived meanings in the past, and that certain forms of violence taking place were not deviant or maladaptive. Rather, it reinforces the argument that certain forms of ritualized violence likely served to foster community identity, group cohesion, and even lend stability during times of environmental and cultural change within these ancestral Native American communities.

Sims, Aaron [254] see Ryzewski, Krysta

Sinclair, Anthony (University of Liverpool, UK)**[63]***Moderator***Sinclair, Anthony (University of Liverpool, UK)****[173]***The Citation Process in Archaeology*

Citation counts are a significant source of data for the evaluation of research by institutional managers and research grant providers when looking at projects and individual scholars. Raw citation counts, however, are inappropriate for this purpose except when seen in the context of comparative publications. This is usually accomplished by the normalization of citation counts within a discipline or subject area—as recognized by the major bibliometric databases. This process of normalization is problematic for archaeology since these same databases recognize just two types of archaeology in either the arts and humanities or the sciences, while specialists writing in archaeological publications recognize as many as 50 different types of archaeological research. This poster will explore the nature and variability of referencing practices within archaeological publications since 1970 that are the source of citation data. Specifically, it will explore variation in the patterns of references made by the various subfields examining the spread of references made to other research areas, the referencing of publications of different ages, and differences in citations received between men and women and scholars by seniority. It will present a more detailed discussion concerning the limitations of citation counts in the evaluation of archaeology.

Sinders, Elizabeth (Indiana State University), Alex Badillo (Indiana State University), Stephen Aldrich (Indiana State University) and Brooke Drew (Indiana State University)**[43]***Old Union Cemetery, Indiana*

In 2021, I started working on a privately funded preservation project doing 3D data curation for Old Union Cemetery of Marion County, Indiana in association with the Geospatial and Virtual Archaeology Laboratory (GVALs) at Indiana State University. In this poster, I present our methods of processing the data that has been collected over the past three years through structure-from-motion (SfM) photogrammetry. I present some of the issues we have encountered while processing the data as well as what methods have worked best for us. I also present a few examples of the 3D models we have created, along with some of the grave markers that have been 3D printed from those models.

Sinelli, Peter [278] see Gomez, Melissa

Sinensky, R. J. (UCLA; Crow Canyon Archaeological Center) and Sarah Oas [149]

Goin' on Forever: A Retrospective on Karen Adams and Relationships with Maize

For over three decades Dr. Karen R. Adams has been at the forefront of research on the origins and long-term evolution of maize (*Zea mays* subsp. *mays*) in the US Southwest and northwestern Mexico. Dr. Adams has approached untangling the complex and oft convoluted histories of maize in a collaborative and multidisciplinary fashion. Among her immense research contributions are collaborative, controlled grow-outs of native maize varieties with agronomists, soil scientists and Indigenous farmers, detailed analyses and experimental studies examining modern and ancient maize morphology, and the major environmental and cultural influences on the attributes of maize most commonly preserved in the archaeological record, studies of nutritional content of Indigenous maize varieties, and the documentation of thousands of archaeological maize fragments spanning over three millennia prior to Spanish contact. We explore the voluminous contributions Dr. Adams has made to our understanding of ancient maize in the greater Southwest/Northwest over the course of her career and chart a path forward for studies of ancient maize inspired by her work.

Sinensky, R. J. (UCLA; Crow Canyon Archaeological Center) [149]

Chair

Sinensky, R. J. [149] see Oas, Sarah

Singer, Zachary [92] see Leslie, David

Singh, Natasha (University of Tübingen), Ewa Dutkiewicz (University of Tübingen), Sibylle Wolf (University of Tübingen) and Nicholas Conard (University of Tübingen) [58]

How to Carve Ivory and Drill Holes in Mammoth Ivory Beads

Researchers have often called the Swabian Aurignacian the Ivory Age, and in fact, this term is entirely fitting due to the great number and diversity of ivory artifacts. These artifacts include a wide variety of both tools and symbolic artifacts including beads, figurines and flutes. Here we address which stone tools were used to make ivory artifacts. Based on experimental research and comparisons with archaeological material, we discuss techniques used for carving, marking and drilling. We also examine the prospects of identifying specific signatures of individual ivory craftspeople. While we employ a range of macroscopic techniques, our focus lies on how high-resolution microscopic, techno-functional studies can contribute to these questions.

Singh, Ravindra Nath [256] see Kim, Pangyu

Singh, Vikas Kumar [256] see Kim, Pangyu

Singleton, Theresa [227] see Kulstad-González, Pauline

Sink, Taylor**[265]***Establishing Lithic Site Profiles for Joshua Tree National Park*

Despite nearly a century of archaeological investigations in Joshua Tree National Park, a history of arbitrary and inconsistent nomenclature for lithic materials has precluded any sort of landscape-level assemblage comparisons. To address this, I have assembled a dense catalogue of all visually-distinct lithic raw materials and their relative frequencies at a variety of sites across the northwestern portion of the park. I propose that this reference will enable the systematic recordation of lithic assemblages in the future and eventually allow for the evaluation of these assemblages as part of a cultural continuum, rather than as isolated sites. Even the preliminary findings of my fieldwork are already highlighting sites with anomalous raw materials or ratios of materials, suggesting that these methods may aid park management in identifying sites with greater data potential or elevated management sensitivities

Sion, Julien [118] see Perla Barrera, Divina

Sisneros, Samuel [7] see Ralston, Claira

Sitzia, Luca (Universidad de Tarapacá, Arica, Chile), Javiera Tapia (Universidad de Tarapacá), Francisco Garcia-Albarido Guede (University of Pittsburgh), Claudio Latorre (Pontificia Universidad Católica de Chile) and Calogero Santoro (Universidad de Tarapacá)

[119]

Tracking Kelp-like Marine Seaweed Fuel in the Archaeological Record of Atacama Desert Coast through Raman Spectroscopy: Insight from the Analysis of Macro- and Microremains of Charred Particles

The use of seaweed as fuel has been mentioned in ethnographic sources from different world regions. Still, the archaeological record of seaweed burning is limited to contexts where preservation is exceptional, and the macroscopic discrimination of charred remains is possible. In the Atacama Desert coast (northern Chile), the unusual preservation conditions of organic remains provide direct evidence of charred remains of kelp-type seaweed in at least 10 archaeological contexts. Based on this high-quality record, we developed a methodological tool using Raman spectroscopy, which is particularly relevant in contexts with poor preservation of charred particles. Combined with a machine-learning approach, this tool can robustly discriminate between seaweed and terrestrial plant chars in the archaeological record. The method is effective for macroremains and potentially for chars observed in micromorphological thin sections. In this presentation, we discuss the application of this new methodology to charred macroremains and those observed in micromorphology thin sections. These charred particles were sampled from several Atacama Desert Coast shell midden sites from the Early to the Late Holocene. Bringing together this evidence, we further discuss the long-term use of seaweed fuel by Atacama Desert Coast communities.

Sitzia, Luca (Universidad de Tarapacá, Arica, Chile)**[119]***Chair*

Sitzia, Luca [242] see Garcia, Magdalena

Sitzia, Luca [119] see Zurro, Debora

Sjödahl, Julia [287] see Johnson, Rachel

Skaggs, Sheldon [83] see King, Adam

Skaggs, Sheldon [291] see McNeil, Cameron

Skinner, Andrew [156] see Challis, Sam

Skinner, Jessica [330] see Jones, Catherine

Skipton, Tara (University of Texas, Austin)
[131]

Connected Then, Connected Now: The Archaeology of One Plantation within New Orleans's Plantation Country
Just upriver from New Orleans, Evergreen was just one of the several hundred plantations that flanked both sides of the lower Mississippi River. We have begun archaeological investigations into the lives of the enslaved at Evergreen, but it has become increasingly clear that this work extends beyond this plantation and the Antebellum. In this presentation, I lay out several theoretical considerations that may help archaeological approaches to plantation contexts become necessarily multidimensional. In order to understand life on plantations such as Evergreen, archaeologists must take a broader regional approach that incorporates other plantations, other free and enslaved Black communities, and what is happening in New Orleans. A multi-temporal approach is also critical as there is no clear-cut end to many of the phenomena occurring during enslavement as these legacies persist to the present day; thus, we as archaeologists are responsible for understanding how our actions play into these dynamics.

Skipton, Tara [131] see Mehta, Jayur

Skousen, Jacob (Western Illinois University)
[331]

Chair

Skousen, Jacob (Western Illinois University)
[331]

Pilgrimage Centers as Persistent Places: Spiritual Magnetism, Affects, and Atmospheres

Pilgrimage centers and shrines are persistent places due in large part to spiritual magnetism, defined as the power of a place of pilgrimage to attract devotees. Most scholars, following James Prestons's original treatment of the term, believe spiritual magnetism comes from and is conferred by humans based on cultural, social, or historical factors or events that are associated with certain places. However, I contend that spiritual magnetism is better viewed as the unique and lasting affective qualities or atmospheres that emerge at a place due to the intermingling of various phenomena, human and otherwise. In this paper, I examine how the intersection of natural features, bodies, objects, substances, memories, and emotions at two famous Christian pilgrimage centers—*Lourdes* and *Santiago de Compostela*—generates meaning, power, and efficacy and ultimately is what draws people to these places. Moreover, I suggest that because affective qualities and atmospheres are contextual and ever emergent, these places will remain potent and continue to draw visitors for years to come.

Skowronek, Russell (University of Texas Rio Grande Valley), Roseann Bacha-Garza (University of Texas Rio Grande Valley), Juan Gonzalez (University of Texas Rio Grande Valley), Christopher Miller (University of Texas Rio Grande Valley) and Edward Gonzalez-Tennant (University of Texas Rio Grande Valley)
[45]

Ancient Landscapes of South Texas, an Educational and Engagement Initiative for the Earth and Social Sciences

In July 2019, the award-winning Community Historical Archaeology Project with Schools [CHAPS] Program at the University of Texas Rio Grande Valley embarked on a bold initiative demonstrating how the purposeful integration of locally focused earth and social sciences could radically alter K–12 education and engage the broader community in their historical “landscape.” COVID slowed the process but with funding from the

Roberts, Summerlee, and Houston Foundations the CHAPS Program created a unique far-reaching program for educational and community engagement which integrates the earth and social sciences. They include K–13 lesson plans developed by Native American, natural, and social science educators aligned with Texas Essential Knowledge and Skills educational standards. To support teachers in the classroom are educational teaching trunks, an augmented reality enhanced projectile point poster, a popular book, and a 45-minute documentary film. A bilingual tour map, bilingual web page, and bilingual traveling exhibit supplements the classroom experience and are platforms for broader community engagement. The Ancient Landscapes of South Texas initiative template is expandable and has the promise to make archaeology's position within STEAM (Science, Technology, Engineering, Arts, Math) education more accessible and less aspirational.

Slack, Michael

[235]

Chair

Slack, Michael

[235]

A Simpler Time: Archaeological Excavations and Assessment at Juukan Gorge 2008–2014

This paper discusses the archaeological excavations at Juukan Gorge in 2008 and then in 2014. We present a Late Pleistocene and Holocene chronology for the Gorge (see Slack et al. 2009), indicating that Aboriginal people first occupied the interior of the Hamersley Plateau in Western Australia over 46,000 years ago. Human settlement in the region continued throughout Marine Isotope Stage 3 (MIS3) and Stage 2 (MIS2), including the height of the Last Glacial Maximum (LGM) ca. 23,000–19,000 years ago. The archaeology of the Juukan 2 site is presented in detail, a record of thousands of stone artifacts, bone implements, organic material, and sacred items unrivaled by any other Australian arid zone site. The results show unequivocally how the Juukan Gorge sites were of international significance and should never have been disturbed.

Slack, Michael [235] see Neill, Liam

Slaughter, Michelle (SRI)

[254]

The Dry: A Case Study of Collaboration between Archaeologists and One Descendant Community

The Dry, an early twentieth-century Black homesteading community, offers a long-lasting example of collaborative public archaeology. Thanks to generous grant funding, we practiced inclusive teaming with the descendant population, from project conception through every stage of our work, even beyond completion of the project. The extent and depth of what we learned at The Dry was only possible through direct partnership with the descendant community. The project was featured in multiple newspaper and radio stories while the work was ongoing, but even after the project was finished, information about The Dry continued to garner public interest, leading to a comprehensive story and interview on Colorado Public Radio, and finally culminating 10 years later in a beautiful and poignant photo exhibition that opened in Colorado's state history museum in 2023 and remains on display today.

Slocum, Diane (University of North Carolina), Patricia McAnany (University of North Carolina) and Iván Batún-Alpuche (Universidad de Oriente, Valladolid, Yucatán)

[254]

Dynamic Heritage as a Path to Collaborative Knowledge Production in Tahcabo, Yucatán, Mexico

The focus of archaeological work has shifted in recent decades to collaborative frameworks that allow for sharing of knowledge production among local and descendant communities. Drawing on the work of Laurajane Smith, we argue that recognizing heritage as a dynamic social process rather than exclusively an artifact or archaeological site is an important element of shared knowledge production or democratizing heritage. The perspective of heritage as a process moves beyond conventional understandings of archaeological sites as static

remnants of past activities and instead highlights how sites hold diverse meanings in the present. Drawing on the use of oral histories to investigate a church in Tahcabo, Yucatán, Mexico, as a case study, this paper demonstrates how previous approaches to colonial architecture, which interpret colonial buildings as temporally inert remnants of colonial powers, contradict local understandings of these structures.

Slotten, Venicia (University of California, Berkeley)

[128]

The Forest Foods of Ancient Arenal, Costa Rica

Paleoethnobotanical investigations at two different domestic structures in Arenal, Costa Rica, reveal the plant resources utilized by past peoples living in this volcanically active setting from 1500 BCE to 600 CE. Over 100 different genera of trees have been recovered and identified between the two sites, over half of which produce edible fruits, leaves, or vegetative material. These results demonstrate that the people of ancient Arenal were knowledgeable arboriculturalists who did not rely heavily on agriculture for their subsistence practices and would have been able to collect from a variety of trees for their subsistence needs. While cacao is a prominent tree within the wood charcoal assemblage at both sites, other notable fruit trees include achioté, avocado, cashew, cherry/plum, fig, guava, hogplum/jocote, mamey, nance, palms, ramon, sapodilla, and soursop/guanabana. Trees would have been able to withstand minor volcanic eruptions, whereas low-lying vegetation such as milpa agricultural fields would not have survived such conditions. The macrobotanical results suggest that the ancient inhabitants employed mixed strategies for subsistence and may have preferred food resources that would have remained accessible during times of ecological stress.

Slusarska, Katarzyna (University of Szczecin/Poland), Jacek Karmowski (Jagiellonian University, Kraków, Poland), Ariel Gruenthal-Rankin (University of Hawai'i, West O'ahu), Katherine Gaddis (University of Nevada, Las Vegas) and Marissa Ramsier (California Polytechnic State University, Humboldt)

[80]

Life and Death by the Lake in Pomerania: Introducing the Late Medieval Cemetery at Żelewo Site 1-3

The late medieval cemetery in Żelewo is in northwestern Poland, near Miedwie Lake, on the moraine hill named Catherina's Hill. Excavations began in 2019 and continued in 2023 as a salvage archaeology project. The site is part of the Kołbacz Monastery's estate—founded in 1173—the oldest Cistercian monastery in Pomerania. The cemetery is related to the as-yet undiscovered village of Jaśnica, known only from fourteenth-century writings. Cistercians were known for efficient management of cultural and environmental landscapes. Therefore, this project aims to (1) help rebuild the lost history of the region while mitigating site damage, (2) trace medieval cultural and environmental changes, and (3) investigate the Cistercian's role. Graves excavated during 2023 and 2019 included at least 28 adult and 16 nonadult individuals, from prenatal/infant to older adult. Most burials were oriented west–east, consistent with Christian practices. Recovered grave goods included one bronze belt buckle. Individuals evinced a range of pathologies and trauma, including unique patterns of dental caries and antemortem tooth loss. Traces of previous occupations included flint tools from the Late Paleolithic, Middle to Late Mesolithic, and Late Neolithic, and Roman Iron Age graves and metal artifacts. These findings illuminate potential lifeways in the region.

Sluyter, Andrew (Louisiana State University)

[260]

Discussant

Smallwood, Ashley (University of Louisville), Jessi Halligan (Texas A&M University), D. Shane Miller (Mississippi State University), Thomas Jennings (University of Louisville) and Katherine Barry (North Wind Resource Consulting)

[82]

Ancient Lifeways but Not Archaic Approaches: Theoretical and Methodological Contributions from Researching the Earliest Record of the American Southeast

We review contributions of archaeologists studying the Pleistocene and Early Holocene records in the American Southeast. Researchers expand on a variety of theoretical approaches, including the evolutionary theories of human behavioral ecology and cultural transmission, technological organization, and gender archaeology. While still rooted in processual archaeology, great efforts have been made to build and test relational analogies, and major contributions of this work include experimental approaches to technology and the gathering and modeling of paleoenvironmental data. This work has implications for understanding climate-induced site destruction and resilience and social implications for connecting with and respecting ancestral histories of indigenous communities.

Smallwood, Ashley [72] see Jennings, Thomas

Smallwood, Ashley [253] see Miller, D. Shane

Smeeks, Jessica (SUNY New Paltz)

[277]

Defensibility, Cooperation, and Centralization: A Comparative Analysis of the Interrelationship between Warfare and Sociopolitical Organization in Late Intermediate Period Peru

This research advances the current theoretical agendas of warfare scholars, overcoming the limitations of earlier social evolutionary theories and examining the interrelationship between warfare and sociopolitical organization in the Huamanga Province of Peru during the Late Intermediate period (LIP; AD 1000–1450). Only through the analysis of this interrelationship can scholars begin to understand warring societies across time and space. The LIP is an ideal period to study this relationship, as it has often been characterized as a time of violent conflict and social transformation. More specifically, this paper presents the final results of archaeological surveys carried out at 14 sites in the Huamanga Province. These surveys included extensive mapping of all standing architecture, surface artifact analyses, and GIS-based spatial and visibility studies. First, focusing on the 14 sites, this paper evaluates local (site-level) relationships of community cooperation and power and associated practices of defense. Then, incorporating all known LIP sites in the region, it considers how sociopolitical interactions between LIP settlements (regional-level relationships) relate to defensibility practices.

Smid Núñez, Jeny [222] see Smith-Guzmán, Nicole

Smit, Douglas (University of Pennsylvania)

[6]

Chair

Smit, Douglas (University of Pennsylvania), Megan Kassabaum (University of Pennsylvania), Sarah Linn (Penn Museum) and Latiayna Tabb (Tabb Management)

[6]

Unearthing Difficult Histories: The Delicate Balance of Public, Community, and Campus Archaeology in West Philadelphia's Black Bottom

This paper discusses the conception, implementation, and ongoing results of Heritage West, an archaeology project co-developed by academic archaeologists at the University of Pennsylvania and community stakeholders. Heritage West delves into the intertwined narratives of migration and urban renewal in the Black Bottom—a historically Black neighborhood razed in the 1960s by the Philadelphia Redevelopment Authority to facilitate the expansion of UPenn and Drexel. This project is simultaneously an attempt to mobilize community archaeology to assist former Black Bottom residents and their descendants' objectives of preserving their history, a public initiative to highlight the role of archaeology for understanding the recent past in an urban context, and a campus project entailing an undergraduate field school during the fall 2023

semester. Our discussion explores the challenges and intricacies of such multitiered engagement, showcasing how a synergy of community interaction, oral history, and urban archaeology can illuminate the everyday lived experiences of Black Bottom residents between 1850 and 1960.

Smith, Alexander (SUNY Brockport), Amalia Pérez-Juez (Boston University) and Kathleen Forste (Brown University)

[191]

Diachronic Domestic Spaces at Torre d'en Galmés: Results from the 2022–2023 Seasons of the Menorca Archaeological Project

The Menorca Archaeological Project (MAP) investigates the site of Torre d'en Galmés on the Balearic Island of Menorca (Spain). While the site is primarily known for its prehistoric Iron Age remains, it was also home to a small Medieval Islamic farming community, primarily in the twelfth and thirteenth centuries AD. Built atop and between the Iron Age structures, MAP is dedicated to the excavation of the entirety of Torre d'en Galmés' history, taking an explicitly multi-temporal approach to the understanding of both the Iron Age and medieval habitations of the site. Since 2021, MAP has excavated multiple Islamic house compounds that have provided evidence of a population that had to quickly establish themselves in an abandoned prehistoric site after being removed from other parts of Spain as part of the Christian conquest. The excavations have also shown that these Islamic structures preserve the Iron Age remains underneath them, illustrating the benefits of taking a multi-temporal approach. This paper will discuss the results of the 2022–2023 seasons specifically focusing on our understandings of the Islamic village and the excellent preservation of the Iron Age remains beneath it.

Smith, Alexander [179] see Forste, Kathleen

Smith, Audrey (University of Pittsburgh), Claire Ebert (University of Pittsburgh), Brett Meyer (University of Michigan), Julie Hoggarth (Baylor University) and Jaime Awe (Northern Arizona University)

[199]

Canid Diets and Social Roles in Ancestral Maya Communities in the Eastern Maya Lowlands

For millennia dogs (*Canis familiaris*) have fulfilled various biological, functional, and companionship roles, yet their use and significance in Mesoamerica varied substantially through time. Previous studies of dogs in the Maya lowlands argued that human-canid relationships involved high levels of dog consumption, though zooarchaeology and epigraphic sources also suggest important ritual roles beyond food. This study explores the social role of dogs in the Belize River Valley region of western Belize from the Preclassic through Terminal Classic period (~1000 BC–AD 900/1000) through dietary reconstruction based on stable isotope analyses of dog bone collagen and apatite ($\delta^{13}\text{C}_{\text{co}}$, $\delta^{15}\text{N}_{\text{co}}$, $\delta^{13}\text{C}_{\text{ap}}$). Results indicate a spectrum of diets reflecting differences in human-canid relationships. Some dogs consumed lower proportions of C_4 foods like maize, suggesting they likely spent time away from human settlements and possibly served as forest hunting companions. Dog remains from Classic period (AD 300–900/1000) ceremonial deposits typically have a stronger C_4 signal compared to those from domestic or monumental settings, perhaps suggesting purposeful feeding of animals included in ritual activity. Classic period management may be linked with the increasing importance of dogs as symbolic ritual agents instead of serving as food.

Smith, Byron (University of Texas, Austin), Timothy Beach (University of Texas, Austin) and Sheryl Luzzadder-Beach (University of Texas, Austin)

[130]

Beyond the Birds of Paradise: A Geoarchaeological Investigation of Large Ancient Maya Linear Wetland Features

Growing scholarship since the 1980s has focused on ancient Maya–wetland interactions after raised field agriculture was revealed in northern Belize. From this, mounting evidence indicates extensive reliance on seasonal and perennial wetlands for ancient Maya farming, aquaculture, and water retention across the region.

These systems would have served as major sources for food production and oases against the seasonal wet/dry hydroclimate and episodic long-term drying of the neotropics. The Birds of Paradise (BOP) wetland fields of NW Belize are one such system with use starting in the Late Preclassic, ~2000 BP, and lasting through the Postclassic (after 1000 BP). Lidar imagery from 2016 and 2022 revealed a group of linear wetland features downstream of BOP that span more than 730 m and may have been fed by runoff from nearby wetland canals. Our goals here are to test multiple hypotheses for these features by dating with AMS, identifying connections to waterways through hydrological modeling, and detecting evidence of construction and use through soil chemistry, isotope geochemistry, particle size analysis, and aDNA. Our early results show evidence for complex constructions throughout the region connected to a network of transportation corridors and the wetland fields, canals, and broader watershed.

Smith, Catherine (Florida Museum at University of Florida), Neill Wallis (Florida Museum at University of Florida), Geoffrey Thomas (Florida State University), Kathryn Miyar (Florida Bureau of Archaeological Research) and Sam Wilford (Florida Bureau of Archaeological Research)

[72]

Establishing Institutional Partnerships that Reunite Communities through Joint Repatriation

The Florida Museum of Natural History at the University of Florida, Florida State University, and the Florida Bureau of Archaeological Research have a shared institutional history. This long-standing interconnection has resulted in intertwined holdings, which create numerous split-and-share issues for NAGPRA compliance. To resolve these issues and better facilitate full community returns, we have committed to full partnership across our shared repatriation efforts. This partnership entails the inter-agency sharing of archived documentation and related inventories, collective consultation with Tribal nations, and joint submissions to National NAGPRA. We are together in our commitment to shared consultation decisions for disposition and repatriation and our willingness to coordinate the physical transfer of ancestors and their belongings in accordance with recipient nations wishes. We cooperatively support other institutions that may also retain portions of these collections and, through open communication, ensure that we do not inadvertently create new split situations when accessioning. This collaborative approach to repatriation aims to comprehensively, respectfully, and expediently unite and return ancestral communities.

Smith, Chris [246] see Halcrow, Sian

Smith, Claire (Flinders University)

[147]

Discussant

Smith, Claire (Flinders University) and Heather Burke (Flinders University)

[147]

Teaching Archaeology to Change the Status Quo

When we were students there were few Aboriginal archaeologists—and no Aboriginal faculty employed to teach archaeology at a university. When we became university teachers we worked to change this situation. This presentation outlines our teaching strategies and the efforts undertaken by our peers who also sought to change the status quo. It details our challenges, successes, and failures. Over time, it has become clear the vision of an Aboriginal archaeology peopled by Aboriginal archaeologists has to be enacted across generations of teachers. While there are now more Aboriginal archaeologists, there are still too few. We finish this presentation with our key learnings: cultural safety, culturally appropriate support, and the importance of community.

Smith, Donald [244] see Hayward, Michele

Smith, Erin (Eastern Washington University)**[36]***Chair***Smith, Erin (Eastern Washington University) and Colin Grier (Washington State University)****[36]***The Conscious Midden: An Indigenous Ontological Approach to Mound Building, Environmental Sustainability, and Other-Than-Human Selfhood in the Pacific Northwest Coast Salish Sea*

The Salish Sea is a region speckled with coastal shell mounds. Often these places are the remnants of winter villages occupied over generations. Mounds were built with intention and foresight to leach nutrients into the surrounding ecosystem, sustaining the environment for generations. Millennia ago, Indigenous peoples understood through transgenerational knowledge how these features contribute to the renewal of beings—or, what contemporary Western science colloquially calls Earth's biogeochemical cycles. Some shell middens were understood as conscious and composed of beings that agreed to being caught/harvested. In taking an ontological approach to mounds, we utilize ethnographic and archaeological data to explore human-environment relationships and the role of Indigenous Ecological Knowledge. Grounded in perspectivism and an ecology of selves, this approach allows for a deeper understanding of selfhood among other-than-human beings, the relational association of beings in mounds, and the larger ethos of environmental sustainability. This paper is also a critical call to protect conscious middens from accelerated erosion due to climate change and the onset of harsher winter storms. Preserving conscious middens thus extends beyond the realm of archaeological preservation; rather, it is tantamount to conserving ecosystems and biodiversity, and reflects a renewed relationship with the diverse beings of the Salish Sea.

Smith, Geoffrey (University of Nevada, Reno)**[219]***Chair***Smith, Geoffrey (University of Nevada, Reno), Richard Rosencrance (University of Nevada, Reno) and Katelyn McDonough (University of Oregon)****[219]***Revisiting the Western Stemmed Tradition Component of Last Supper Cave, Nevada*

Last Supper Cave (LSC) is located in the rugged High Rock Country of northwestern Nevada. Thomas Layton excavated the cave in 1973–1974 under the auspices of the Nevada State Museum. He recovered a diverse assemblage of lithic, fiber, and wooden objects including a number of Western Stemmed Tradition (WST) points. Radiocarbon dates and time-sensitive projectile points suggested that people used the cave for much of the Holocene. Despite the assemblage's potential to address a range of questions, it was never fully analyzed. Beginning in 2008, researchers from the University of Nevada, Reno, and Nevada State Museum began reanalyzing the collection—work that continues today. Here, we present new radiocarbon dates from cultural features that provide a better understanding of when people visited the site, with a particular focus on the late Pleistocene and early Holocene. Our work draws on Bob's many contributions to our field in the areas of radiocarbon dating, lithic technology, and hunter-gatherer archaeology.

Smith, Geoffrey [87] see McDonough, Katelyn

Smith, Geoffrey [138] see Rosencrance, Richard

Smith, Gerad (University of Alaska, Anchorage), François Lanoë (University of Arizona), Joshua Reuther (University of Alaska Museum of the North), Charles Holmes (University of Alaska, Fairbanks) and Barbara Crass (University of Alaska Museum of the North)**[168]***Site Assemblage Insights from the Middle Tanana and Middle Susitna River Basins, Alaska: Understanding the Later Denali / Northern Archaic Transition*

This paper discusses and compares site assemblages dating to the Denali and Northern Archaic transition in central Alaska. This time period, ~10,000-6,000 cal BP, represents an understudied period in the region. The paper presents data from the Carpenter, Hollembaek, North Gerstle Point, and Swan Point assemblages. It further discusses apparent adaptive strategies in the context of changing middle Holocene ecology and how this facilitated the appearance of the Northern Archaic on the southern foothills of the Alaska Range.

Smith, Heather (Texas State University), Samantha Krause (Texas State University), Amy Reid (Texas State University), Sabrina Boyd (SWCA Environmental Consultants) and Trey Lasater (Texas State University)

[281]

A Multicomponent Archaeological Site at Spring Lake, San Marcos, Texas

In the 1970s, researchers recovered fluted points that appeared diagnostic of Clovis technology in Spring Lake, the spring-fed headwaters of the San Marcos River located along the Balcones Escarpment in Central Texas. Although recovered in mixed stratigraphic contexts, this evidence suggests that Ancestral Peoples may have visited the site for over 13,000 years. Since then, several research teams have confirmed that the site provides evidence of consistent human use throughout the early Holocene, Archaic, and Historic periods and remains significant in the traditions of contemporary Indigenous Cultures. In this poster, we summarize results of previous archaeological and geoarchaeological investigations and the archaeological problems that continue to drive research at this important cultural resource and on the site's artifact collections. Discussion will highlight how ongoing investigations by our team of Texas State University researchers and students are addressing problems concerning access to and the integrity of stratified cultural deposits, diachronic and synchronic variation in prehistoric peoples' activities around the lake, and our understanding of Ancestral lifeways practiced in Central Texas.

Smith, Heather [316] see Reinhardt, Abbigail

Smith, J. Gregory (Northwest College), Uzma Rizvi (Pratt Institute) and Adam Green (York University)

[150]

Decolonizing Mohenjo Daro: A Participatory Approach to Archaeology in Pakistan

Expanding the geographic coverage of the Collaborative and Community symposium to the Global South, this presentation covers the 25 years of community-based and participatory work done in South Asia, with a particular emphasis on the last five in Pakistan at the World Heritage Site of Mohenjo-Daro. Our archaeological collaboration is run under the Laboratory of Integrated Archaeological Visualization and Heritage (LIAVH.org) at the Pratt Institute. LIAVH makes connections between technology, archaeological data management, and heritage practice. For a century, Mohenjo-Daro has been excavated, photographed, drawn, mapped, and written about, and yet, there is still so much we cannot quite figure out about the ancient city. In this presentation, we will highlight the 2023–2024 winter field season focused on a program of photogrammetry using both drones and hand-held cameras. A key component of this research is pedagogic and participatory, specifically focused on building capacity through teaching workshops and including local and regional specialists and students of archaeology. Rather than pursuing archaeology as an extractive exercise, this research engenders generative modes of knowledge production and sharing.

Smith, Jaye (Council of Allied Societies) and Jeffery Clark (Archaeology Southwest)

[52]

Continued Work on the Ray Robinson Collection: Preliminary Investigations into the Clont's Farm Site, John's Farm Site, and Other Nearby Sites in the Safford Basin of Southeastern Arizona

As investigations continue into the Ray Robinson Collection by its dedicated team of volunteer researchers, we return our attention to the poorly documented Safford Basin of southeastern Arizona. In addition to the preliminary data previously presented based on Ray's investigations on the Cork and Elmer's Farm sites, we

have completed our preliminary research on the Clont's Farm site and the John's Farm site (AZ CC:2:2 ASM) near the eastern end of the Basin and the nearby sites of Melvin's Farm and Cottonwood Canyon in the western portion of the Basin. Clont's Farm site is a room block with 30–50 structures on private land. The settlement dates to the late eleventh and early twelfth centuries and is one of very few sites investigated from this period. The John's Farm site dates primarily to the later Salado period during the fourteenth century and comprises area near the residence and in the adjoining fields owned at the time by the Paul John family. This paper will share the results of documentary research conducted using Robinson's notes and will present a detailed inventory of the artifact assemblages from each as well as ceramic typological and obsidian sourcing analyses.

Smith, Lawrence

[176]

Applied Systems Engineering Can Help See into Non-contiguous Debris Zones with New Eyes

Finding the lost ships of Tristan de Luna's fleet is a high-priority historical challenge. Florida archaeologists discovered three of the lost ships in Pensacola Bay. Applied systems engineering can help see into non-contiguous debris zones with new eyes. A 1559 hurricane destroyed ships associated with Pensacola's first settlement. Three ships were found in bay (1992–2016) near downtown Pensacola. The others were reported to have run aground, wrecked on sandbar, or landed intact ashore. Pensacola Bay has 30 miles of shoreline and hosted lumber and brick industries. Applied systems engineering can reconcile physics-based assumptions, topography, and mass analytics. Conservation of mass predicates that ballast, any high-density cargo, and some wood will not disappear. Topographical clues from historical record describe several discernible land or water features. Wood debris is relatable to time. Physics-based clues in littoral zone, consistent with record, can illuminate areas for further study. Noncontiguous debris zones are contaminated by lumber and brick industries. Carbon 14 is radioactive isotope used to determine time since tree was alive. Mass analytics complement wood genus identification using ¹⁴C radiocarbon dating. Wood dates older than 460 years before present may correlate to shipwreck. Results forthcoming of analyses of driftwood collected from possible shipwreck area.

Smith, Maria [26] see Kennedy, Sarah

Smith, Mariah [257] see Blake, Asher

Smith, Monica (UCLA)

[301]

Discussant

Smith, Morgan [82] see Cook Hale, Jessica

Smith, Morgan [67] see Perrotti, Angelina

Smith, Nicole [304] see De Leon, Jason

Smith, Rachael

[123]

Use of X-Ray Fluorescence for Elemental Analysis and Resolution of Commingled Remains with the Arch Street Project
During early excavations of the Arch Street Project collection, remains were commingled. Reassembling commingled remains is a long, difficult, and technically advanced process that can take years if not decades to

complete. This study uses XRF on eight individuals from the Arch Street Project to assess the validity of using elemental analysis to reassociate commingled remains and identify what can be learned from a nondestructive analysis technique such as XRF rather than a traditional destructive method. The analysis identified 15 elements within the eight individuals. The XRF results identify a single unique individual and trends within certain elements. One individual, G-41, contained mercury, along with two other toxic heavy metals, arsenic, and lead. Strontium showed very consistent levels within an individual but distinct, although slight variation between individuals. Lead showed a high degree of variation within and among individuals but also a high degree of clustering. Overall, XRF is a useful method of elemental analysis but is not as accurate as destructive methods. While trends and individual variation were present during analysis, XRF did not have sufficient variation among individuals to resolve the mock commingling.

Smith, Rick (George Mason University), Angelina Locker (Vanderbilt University), Austin Reynolds (Baylor University), Diane Chase (University of Houston) and Arlen Chase (University of Houston)

[34]

Isotopic and Paleogenomic Evidence of Maya Persistence at Late Postclassic and Early Colonial Chactemal (Santa Rita Corozal), Belize

Santa Rita Corozal, hereafter known as Chactemal, is a Maya site located in what is now northern Belize on the coast of Chetumal Bay. Chactemal was home to some of the earliest known Maya peoples in northern Belize during the Middle Preclassic (~800–300 BCE), was continuously occupied throughout all subsequent phases of Maya chronology, grew to become an influential Postclassic Maya capital, and was the site of the earliest Spanish colonization in Belize (1531 CE). Ethnohistoric records indicate that Maya people fled Chactemal before Spanish invasion and launched guerilla-style attacks that prevented permanent Spanish settlement in the region. However, no prior archaeological evidence exists that the Maya people returned to Chactemal during the sixteenth century. In this study, we generated radiocarbon, stable isotopic, and paleogenomic data from 17 Maya Ancestors at Late Postclassic Chactemal to refine the settlement chronology, migratory history, and biological relationships of the final interments at the site. We present evidence that the Maya people returned to Chactemal after Spanish occupation and that their return was shaped by memories of their ceremonial and kinship ties to the ancient city. This study was approved by the Belizean Institute of Archaeology and conducted in partnership with Maya communities in Corozal.

Smith, Rick [295] see Freiwald, Carolyn

Smith, Rick [34] see Locker, Angelina

Smith, Ryan (University of Pittsburgh) and Elizabeth Arkush (University of Pittsburgh)

[26]

Surveillance at Ancient Hillforts of the Titicaca Basin, Southern Peru: Insights into Social Dynamics and Defensive Strategies

In this paper we model visibility and movement in and around ancient hillforts or *pukaras* across the highlands of southern Peru. During the Late Intermediate period (1000–1450 CE), communities moved to hilltops where houses were often tightly packed together within the confines of large defensive walls. The coalescence of large populations at these sites, sometimes reaching over 1,000 people, would have been a novel experience where new social roles and relations would have had to be quickly forged among unfamiliar faces and tightly confined spaces. While studies have investigated *pukaras*' views of the outside landscape including other *pukaras*, monitoring one's neighbor within these large sites may also have been important. Architecture is often still intact at these sites, revealing original pathways, plazas, houses, tombs, and storage structures. We rely on recent site mapping at several *pukaras* to better understand the use, design, and movement through these built spaces with an emphasis on private versus public spaces. While previous research provides little evidence of centralization or political control at *pukaras*, our analysis reveals the construction and design of spaces which could result in highly visible and intimate living arrangements, contributing to a shared identity, cohesive communities, and stronger defensive coalitions.

Smith, Ryan [323] see Kohut, Lauren

Smith, Stefan [61] see Tonoike, Yukiko

Smith, Susan
[149]

Archaeobotany Foodscapes

There is more than one way to gain insight about past Native American use of plants. The conventional approach is to collect archaeobotanical samples during archaeological excavations. Another perspective is to inventory the environments surrounding sites and communities to understand the foodscape that might have been accessible to people. Karen Adams was one of the first Southwest archaeobotanists to apply the landscape-scale resource approach to examine prehistoric subsistence strategies. She expanded this ecological research through contract projects and inspired the next generation of archaeologists and archaeobotanists. In this presentation, Karen's field school archaeobotany module from the Rock Art Ranch is summarized and a foodscape archaeobotany example from Ajo, Arizona is presented.

Smith, Zachary [283] see Ferguson, Jeffrey

Smith-Escudero, Sarajane [68] see Ullinger, Jaime

Smith-Guzmán, Nicole (Smithsonian Tropical Research Institute), Jeny Smid Núñez (Universidad de Panamá), Jonathan Cybulski (Smithsonian Tropical Research Institute) and Luis Sánchez Herrera (Museo Nacional de Costa Rica)
[222]

Exploring Biological Affiliations and Cultural Perspectives through Dental Morphology at Cerro Juan Díaz, Panama: A Preliminary Study of the Early Burials (30–650 CE)

Burial space reuse and prolonged interaction with the dead were common practices in the Isthmo-Colombian Area, dating back to at least the Early Ceramic period. However, it is unknown whether the individuals interred in disturbed, multiple burial contexts shared biological or social ties within their communities, or whether they pertained to multiple communities that transported their dead to a shared cemetery space. We explore possible intra-cemetery biological affiliations through a biological distance analysis at the site of Cerro Juan Díaz in Panama, estimated via dental metric and non-metric traits present in individuals recovered from multiple burial contexts from the first mortuary horizon. Inter-individual differences compared across burial group, age, and sex showed broad similarities between the three burial contexts. Significant differences in biological distance were found only when the pooled data were compared by age (adults aged 15+ years to nonadults). Nonadults also showed a significantly higher intragroup phenotypic heterogeneity when compared to adults. Our results are largely consistent with previous notions of Cerro Juan Díaz's function as a community burial ground. Infants and children may have been brought to the site for burial from nearby villages, perhaps following specific mortuary traditions governed by age group.

Smith-Guzmán, Nicole [222] see Cybulski, Jonathan

Smith-Guzmán, Nicole [222] see Nunez-Cortes, Yajaira

Smith-Guzmán, Nicole [222] see Sharpe, Ashley

Smith-Leach, Rachel (University of Oxford)
[263]

Hawaiian Archaeology and Disasters: (Re)unification with the Land to Build a Resilient Future

Hawai'i is a dynamic landscape with a unique archaeological record. The archipelago's relatively short physical history has been subject to various disasters, including sea-level rise, tsunami, wildfire, and drought. Predictions indicate that anthropogenic drivers of climate change will increase the frequency and severity of disasters in the Pacific. In the wake of Maui's devastating wildfires, Native Hawaiians are again forced to confront their identity and the destruction of their identity. The natural resources and beauty of the land, once enabling precontact Hawaiians to flourish, have been subjected to colonialism and contemporary tourism. This exploitation and misuse of the islands' resources has resulted in overall uncooperative relationships with the land, increasing the likelihood of disasters. Throughout Hawai'i's precontact archaeological record, there is evidence of Native Hawaiians throughout the islands. The native Hawaiian worldview embodies the concept of interdependence between people and their land. This research explores archaeologists' crucial role in safeguarding and unveiling the Hawaiian worldview found within the archaeological record and how this worldview can enhance today's human-landscape relationship, promoting cooperation with the land for a more disaster-resilient future.

Smyth, Jessica [334] see Buckley, Michael

Snider, Emily

[68]

Death Undone: The Contextual Importance of Human Skeletal Remains in an Analysis of Diachronic Mortuary Practices at Mesambria Necropolis, Bulgaria (ca. 400 BC–AD 1400)

This study addresses the contextual importance of human skeletal remains in identifying diachronic changes and constants in mortuary practices from the Mesambria necropolis, on the banks of the Black Sea in modern Nessebar, Bulgaria. Skeletal remains are the central element of mortuary practices but are often excluded from archaeological interpretation, just as burial context is often disregarded during osteological analysis. By considering both archaeological and osteological assessments, a more comprehensive image of diachronic mortuary practices and corresponding cultural shifts is created. A sample of 538 graves was assessed based on the physical characteristics of interments via photographic, archaeological, osteological, and historical evidence. Notable variation was observed in grave type, degree of preservation of skeletal remains, orientation and positioning of the skeletal elements, and artifact deposits. Utilizing multicomponent interpretation methodology increases the contextual information available for mortuary practices in the Black Sea region through a vast temporal range.

Snitker, Grant [82] see Cochran, Lindsey

Snitker, Grant [308] see Gravel-Miguel, Claudine

Snitker, Grant [282] see Malone, Alex

Snodden, Eava [105] see Christie, Shaheen

Snoeck, Christophe [171] see Werens, Karolina

Snoeck, Christophe [334] see Spros, Rachel

Snoeck, Christophe [334] see Veselka, Barbara

Snortland, J. Signe

[40]

Discussant

Snow, Meradeth (University of Montana), Michael Mathiowetz (Getty Research Institute), Patricio Gutierrez Ruano (Independent Researcher) and Emma Zoiss (University of Montana)
[34]

Migration and Mitogenomes: Analysis of West Mexican Populations to Better Understand Their Place in the Larger Mesoamerican Social Landscape

The world has always been connected through the movement of people, exchange of goods, and sharing of cultural traits; thus, evidence of such can be found within the genomes of individuals, as well as the archaeological sites they leave behind. The present research is comprised of multiple lines of inquiry that address questions of gene flow, genetic variation, migration, trade, and interaction among societies in West Mexico and outlying areas to the east and south. Whole mitochondrial DNA genomes (mitogenomes) have been sequenced from individuals in order to address the main research hypotheses from a variety of sites in the region, including Amapa and Peñitas in the Aztlán core zone in Nayarit, and Tizapán el Alto in the Jalisco highlands. Additional investigation into the relationship between individuals at the coastal sites and the contemporaneous highland sites will also be investigated, particularly in relation to how this may then be related to larger regional migration and trade routes.

Snow, Meradeth [68] see Czaplinska, Tina

Snow, Meradeth [80] see Gembicki, Maciej

Snow, Meradeth [98] see Rebaradi, Haley

Snyder, Brian (New South Associates Inc.), M. Jared Wood (Georgia Southern University), Van King Jr. (Robert E. Perry and Associates) and Michael Glascock (University of Missouri)
[189]

Soapstone Production at 9TO294, a Late Archaic Quarry in North Georgia

[WITHDRAWN]

Snyder, Madeline

[321]

The Negotiation of Status: New Insights into a Late Classic Household at Las Ruinas de Arenal, Belize

There has been a long history of settlement and household archaeology in the Belize River valley that has added significantly to our understanding of everyday people in the Maya lowlands. This research has allowed us to examine questions related to broader cultural norms and traditions, as well as better understand the distribution of settlement across the varied landscape of this region. In this paper, I present new data from a Late Classic household group at Las Ruinas de Arenal, Belize. This non-elite household was built just southeast of the site's Preclassic ballcourt and E-Group complex. Preliminary data from a combination of horizontal and vertical excavation both on and off the platform suggests that the location of this household, as well as the production activities of its occupants, played a role in the negotiation of a more privileged status within the larger Las Ruinas de Arenal community. Through the invocation of social memory and broader timescales of connection with historic places and peoples, the notion of status can be complicated beyond synchronic sociopolitical or economic relations.

Snyder, Thomas (University of California, Davis) and Elizabeth Arkush (University of Pittsburgh)

[277]

Political Complexity and Gendered Violence in the Andes: A Bayesian Approach

The nature of violence in the premodern past remains an enduring question in anthropological research. In this study, we investigate the potential relationship between sociopolitical organization and the frequency and type of violence experienced by adult males and females in Andean archaeological contexts. For this study we establish four broad categories of sociopolitical organization: foragers, early agriculturalists, 'soft' hegemony, and states. Drawing on a database of over 6,700 individuals from over 115 sources and 130 sites, we then

construct a multinomial logistic regression using Bayesian Hamiltonian Monte Carlo methods to fit our model. Our findings indicate that odds of encountering antemortem or perimortem trauma were low for both sexes, but consistently slightly higher for males than females across all categories. However, there are clear differences in the odds of trauma among the four societal categories. Additionally, societies with soft hegemonic influence show higher odds of trauma and atypically similar odds of perimortem trauma for the sexes, suggesting differences in the nature of violent encounters in these societal categories. Our study complicates the notion that increasing sociopolitical complexity leads to decreasing interpersonal violence and highlights the different ways that males and females in the Andes were likely to experience interpersonal violence.

Sobel, Elizabeth [231] see Worman, F. Scott

Sobel, Sonya (Washington State University), John Blong (Washington State University) and Rachel Horowitz (Washington State University)

[202]

Beyond the Biface: Revisiting Cobble Tool Use during the Cascade Phase at the Kelly Forks Work Center Site, Idaho
The Cascade Phase, spanning roughly 9000–5000 years BP, is defined by distinctive lithic technology and edge-ground cobbles. Archaeological data suggests mobile foragers temporarily camped in resource-rich areas during this period. Despite its recognition as a unique cultural period, our understanding of Cascade Phase lifeways, particularly resource use and subsistence strategies, remains incomplete. While previous research heavily emphasized hunting-related biface technology, the presence of cobbles with edge-grinding features remains enigmatic. These cobbles have been hypothesized to represent various plant and animal food processing activities, yet few focused studies provide data supporting these hypotheses. This has left a significant gap in the literature regarding the Cascade Phase toolkit and an incomplete picture of site activities and resource utilization. To bridge this knowledge gap, this research employs macroscopic use-wear and plant microfossil analysis of cobble tools from a well-documented, substantial Cascade Phase cobble feature at the Kelly Forks Work Center Site in traditional territory of the Nez Perce (Nimíipuu) Tribe located in the Nez Perce-Clearwater National Forests, Idaho. This research aims to shed light on the unexplored aspects of Cascade Phase lifeways, the role of cobble tools in resource exploitation, and connections to traditional subsistence practices of the Nez Perce (Nimíipuu).

Sobel, Sonya [281] see Blong, John

Socha, Amy

[36]

A Geoarchaeological Analysis of the Site Formation Processes at Brown Hole and WR-1.

WR-1 and Brown Hole are two submerged archaeological sites in the West Run of the Aucilla River. This thesis utilizes a geoarchaeological approach to evaluate the depositional sequences of these sites as well as their potential for further archaeological investigation. The sedimentary histories of the sites represent adjacent depositional facies within a single environmental locus. WR-1 and Brown Hole have limited additional archaeological potential, Brown Hole having more than WR-1. However, the sites present evidence of a freshwater source and a point of access to that source that has been proven to have been used by humans in the past.

Socha, Dagmara (Center for Andean Studies, University of Warsaw), Ricardo Fernandes (Max Planck Institute of Geoanthropology) and Ruddy Chávez Perea (Independent Researcher)

[212]

The Origins of the Capacocho Victims: Results of Stable Isotope Analyses of Individuals Sacrificed at Ampato, Misti, and Pichu Pichu Volcanos

Capacocha was one of the most important rituals performed in the Inca Empire and involved the sacrifice of children and young women. The victims were selected from the provincial elite based on their beauty and health. They were gathered from across the Empire and brought to the capital, Cusco, in order to be sacrificed during important events associated with the life of the royal court, natural disasters (earthquakes, droughts, volcanoes, and epidemics), and cyclical holidays (e.g., summer and winter solstices). This paper presents the results of the analysis of stable isotopes related to the diet (carbon $\delta^{13}\text{C}$ and nitrogen $\delta^{15}\text{N}$ isotope ratios) and mobility (strontium $^{86}\text{Sr}/^{88}\text{Sr}$ and oxygen $\delta^{18}\text{O}$ isotope ratios) of teeth and bones from 13 individuals sacrificed at Ampato, Misti, and Pichu Picchu volcanos. Isotopic analysis of the tooth enamel revealed that the children had mixed origins, while examination of the bone and teeth of the victims from Misti showed that the diet of some of them had changed in the last years prior to their death. This suggests that the children may have been taken from their place of origin as hostages or *acllas* long before they were sacrificed.

Soderberg, John (Denison University)

[22]

Beasts and Feasts in Late Medieval Ireland: The Case from Mcdermot's Rock

The twelfth-century Anglo-Norman conquest of Ireland triggered a complex swirl of changes that presage dynamics of European colonialism in modern times. One key pattern is the emergence of divides between Anglo-Norman (colonizer) and Gaelic (indigenous) identities. Negotiating differences between “being Anglo-Norman” and “being Gaelic” was vital to implementing and resisting colonial projects in medieval Ireland. Anglo-Norman perspectives on such divides are relatively well known. Gaelic attitudes are not. This paper uses zooarchaeological data from ongoing excavations at McDermot’s Rock—an island retreat in County Roscommon—to compare foodways at a Gaelic high-status site with those from Anglo-Norman castles in eastern Ireland. Colonialist texts tend to denigrate Gaelic foodways as disorderly and bestial. The large and well-preserved faunal assemblage from McDermot’s Rock provides an unparalleled opportunity to discover how animals were used in feasts and other activities to build a Gaelic society.

Solares, Anahí [114] see Carpio, Edgar

Solari, Amara [21] see Restall, Matthew

Solari, Ana [3] see Menéndez, Lumila

Solar-Valverde, Laura (El Colegio de Michoacán A.C.)

[152]

Beyond Teotihuacan: The Decline of Teotihuacan's Sociopolitical System

Toward the end of the sixth century AD, a great fire destroyed the ceremonial center of Teotihuacan, capital of the largest urban development in Mesoamerica. This event was the culmination of a long process of disintegration of Teotihuacan’s macroregional system, a process that began during the ancient city’s apogee. This presentation will reflect on the stimulus that regions outside the Basin of Mexico received by participating in Teotihuacan’s economic and political system. This situation would have led to the sociopolitical complexity of these regions and eventually their independence from the larger system, with the consequent weakening of the center. The simultaneous apogee of several sites, at the time that the Teotihuacan Valley began to experience unfavorable changes, is evidence of a concatenated phenomenon. A long-term macroregional perspective allows contextualizing the decline of the iconic city, which, despite its collapse, remained the largest settlement in the Basin of Mexico during the years to follow.

Solometo, Julie (James Madison University), Stewart Koyiyumptewa (Hopi Cultural Preservation Office), Gregson Schachner (University of California, Los Angeles) and Wesley Bernardini (University of Redlands)

[269]

Exploring Thirteenth-Century Settlements on the Hopi Mesas

Recent collaborative fieldwork on Hopi tribal lands is yielding a new archaeological perspective on settlement during this key time period when migration to the Hopi Mesas accelerated. Newly recorded and redocumented sites include citadel-like structures built up the sides of rocky outcrops, defensible sites atop discrete, steep-sided landforms, and plaza-oriented pueblos. The number and scale of these communities indicates that the Hopi Mesas and their peripheries were more heavily settled in the AD 1200s than previously realized. This poster outlines some of these patterns and explores archaeological perspectives and Hopi traditional history of this key time period.

Somerville, Andrew [214] see Forest, Marion

Somerville, Andrew [201] see Hermsmeyer, Isabel

Sonet, Gontran [53] see Suarez Gonzalez, Nathalie

Sonnenschein, Aaron (Cal State LA)

[252]

Coastlines, Mountains, Linguistic Diversity, or Subaltern Trade Networks: Hypothesizing Sources of Language Isolates in the Isthmus of Oaxaca

As a linguist and specialist in the languages and cultures of the Isthmus of Tehuantepec and Oaxaca, I have long considered that one of the most intriguing hypotheses Dr. Pohl has presented has been on potential maritime networks which might explain the presence of language isolates (Chontal and Huave) in the Isthmus and the settlement patterns along the Pacific coast of Mesoamerica. The current paper investigates this hypothesis in light of more general hypotheses around the diversification of languages (and subsequent decline in linguistic diversity) and the location of language isolates (Nettle 1999; Urban 2021; Van Gijn et al. 2022) and patterns more specific to the northwest Amazon. In fact, similar to findings by Epps (2020) we find that in the case of the Isthmus of Tehuantepec in particular, linguistic diversity, while a good predictor for the presence of language isolates, fails to predict the actual reasons behind the presence of these two isolates. Similarly, geographic explanations also fail. In general, other factors such as the trade networks proposed by Dr. Pohl with the corresponding sociocultural importance of the subaltern nature of said networks may provide better and deeper complementary explanatory power.

Soppela, Päivi [151] see Salmi, Anna-Kaisa

Soriano Garcia, Kevin

[264]

La documentación gráfica en la investigación del arte rupestre: El caso de la Cueva de Las Manitas, Oaxaca, México

[WITHDRAWN]

Sorrentino, Giusi, Alessandro Lo Giudice (University of Turin, Italy), Mauro Veronese (University of Padua, Italy), Elena Badetti (Ca' Foscari University of Venice, Italy) and Laura Longo (Ca' Foscari University of Venice, Italy)

[12]

Replicating Plant Processing: Insights into Ancient Diets and Perishable Technologies

Investigating plant processing in the archaeological record is challenging due to the perishable nature of plant materials and their associated technologies, which are rarely preserved. We examine tools used for grinding and pounding, providing insights into the transformation of plant organs before their consumption. To address this, we have developed and tested a multiscale methodology for analyzing wear patterns and related residues on stone surfaces. This method is validated through replicative experiments, tailored on the evidence recovered from Brînzești I, a Moldovan cave site, where 114 putative ground stones were found in the cultural layer III (32–18 cal ka BP). Our methodological approach has been fine-tuned through replicative sequential experiments, following a standardized protocol that includes Plant Selection: Choosing plant species based on Upper Paleolithic Moldovan biome compatibility, as well as ethnographic and archaeological evidence; Tool Selection: Identifying stones resembling archaeological samples via petrographic analysis; and Detailed Documentation: Employing imaging techniques at various magnification levels, from macro to nano scales to document wear formations and the entrapment of use-related residues. The creation of a reference collection has been pivotal in understanding ancient gestures, timing, and resource productivity, enabling us to gain insights into past exploitation methods.

Sorrentino, Giusi [12] see Longo, Laura

Sorresso, Dominique (University of Florida)

[287]

Early Evidence of the “Mississippianization” of Late Woodland Communities from the Upper Tombigbee River Drainage, Mississippi

In the southeastern United States, the genesis of Mississippian societies circa AD 1000 is often referred to as Mississippianization, or the process whereby regions were incorporating general Mississippian traits. This process involved the spread of a broad cultural horizon that influenced many aspects of life, including how people built their homes, ate their meals, buried their dead, and performed acts of worship. While the cause of this phenomenon has been debated over the years, the spread of practices has been suggested to be the result of the introduction of ideas and ways of doing, an influx of migrants, and/or the arrival of traded goods. To date, the spread of Mississippian practices has not been thoroughly examined in the communities of the Upper Tombigbee River drainage in Mississippi and Alabama. To understand the transition in this region, this study aims to investigate the ceramic practices of the preceding Late Woodland (AD 650–1000) period using ceramic compositional analyses, including petrographic and LA-ICP-MS approaches. I use these data to understand ceramic craft production during this period, as well as to analyze any regional craft traditions that hint at the early incorporation of Mississippian practices.

Sosa Aguilar, Danny (California State University, San Bernardino) and Felicia De Peña (Statistical Research Inc.)

[14]

Experiencing Trade and Exchange: Teaching Archaeological Concepts through Role-Playing Games

When teaching about archaeological concepts on trade and exchange, typically, theoretical models dominate the classroom lecture and discussions. Traditional theoretical discussions limit explanations to biological, social, environmental, or religious reasons. Although lectures and discussions are useful, they limit student understanding of concepts related to trade and exchange. Interactive role-playing games in the classroom offer students a first-hand experience of the various aspects of decision-making and agency within trade and exchange that are not necessarily within the realm of traditional theoretical discussions. For instance, students might engage in trading with another group in retaliation to a third group. The interactive role-playing game allows students to reflect on their decisions while experiencing the emotional and empathetic side of trade and exchange.

Sosa Ruiz, Mónica (Escuela Nacional de Antropología e Historia)**[290]***Chair***Sosa Ruiz, Mónica (Escuela Nacional de Antropología e Historia)****[290]***The Children of the Fire*

Fire is an important part of ceramic production; nevertheless, it is usually taken for granted when studying and analyzing ceramics. Ethnoarchaeology, experimentation, and sensory archaeology allowed us to grasp a better understanding of the relationships entangled between fire-using potter and pottery. An extensive compilation of myths, sayings, and words in *p'urhé* allow us to identify ways of thinking and therefore ways of making. This paper will show the connections found between the information told to Spaniards and compiled through text and that preserved through traditional knowledge and making. These connections strongly relate makers with their making, imprinting on this last one's part of the former one's ways of being.

Sosorbaram, Khurelsukh [199] see Densel, Allison

Sotelo Santos, Laura Elena**[83]***Tiempos de cera y miel: Iconografía, ecología y sacralidad de las abejas nativas en el Códice Madrid*

La evidencia escrita más completa sobre el cultivo de abejas en el mundo maya procede del libro jeroglífico prehispánico denominado Códice Tro-Cortesiano. En los almanaques de las abejas que están en las páginas 89b y 103 a la 112 hay abundante información sobre diversos aspectos de la meliponicultura: las abejas, identificadas como *Melipona beecheii*, colmenas y colmenaras, así como su manejo, desde el traslado de las colmenas silvestres, la "siembra" del jobón y la cosecha; los armadillos como depredadores, los árboles melíferos, las deidades protectoras de las abejas y las ofrendas empleadas. Esta ponencia tiene como objetivo revisar las secciones de abejas del Códice Madrid desde una doble perspectiva: etic como la evidencia escrita más antigua, detallada e integral del manejo de las abejas xunan kab, a través de las categorías conceptuales occidentales contemporáneas (iconografía, taxonomía, zootecnia, ecología) y emic, para acercarnos a los distintos pasajes temáticos del código, como vías de comunicación con el mundo sagrado, identificando los actores (dioses y ¿sacerdotes?) y elementos rituales, principalmente ofrendas. El punto de partida de este trabajo es la analogía etnográfica, y también se recurrirá tanto a fuentes arqueológicas e históricas, pues esta práctica maya parece remontarse más de dos milenios.

Soto, Bayron [126] see Méndez, César

Soto, Victoria (Fondecyt 11200857), Consuelo Huidobro (Fondecyt 11200857) and Josefina Macari (Fondecyt 11200857)**[282]***Exploring Obsidian Hafted Scraper Use-Wear Patterns through Experimental Hide-Working in Southern Patagonia*

Ethnographically, three types of hafted scrapers are found in Patagonia: northern Tehuelche, southern Tehuelche, and Selk'nam. However, due to environmental conditions, hafting materials rarely survive in the archaeological record, hindering our understanding of these tools. To address this gap, we conducted experimental research to characterize the use-wear on obsidian scrapers used for hide-working. Our primary goal was to create reference points for hide-working and particularly for hafting traces using obsidian scrapers. We modeled our experiments on ethnographic tools and conducted scraping trials on fresh and dry sea lion and penguin skins, incorporating additives as part of hide-curing, replicating local resources used by marine hunter-gatherer societies in the Strait of Magellan. We also examined two ethnographic Selk'nam-type glass scrapers. Our traceological analysis of experimental obsidian scrapers revealed distinct patterns in the

distribution of use-wear depending on the scraper type, and notable differences between fresh and dry skin experimentation. Even in the case of fresh skin, significant abrasion was observed. These findings provide valuable insights into the functioning of Patagonian scrapers, shedding light on their use in hide-working activities. By comparing our experimental results with use-wear on ethnographic instruments, we contribute to a deeper understanding of Patagonian tool technology.

Soto, Victoria [178] see Huidobro, Consuelo

Soto Rodriguez, Luis

[323]

Network Analysis in the Tairona Chiefdoms: Settlement Patterns and Social Interaction in the El Congo Microbasin, Sierra Nevada de Santa Marta, Colombia

This paper seeks to present the results of network analysis for the case of the chiefdom communities that inhabited the northwestern slope of the Sierra Nevada de Santa Marta from AD 400 to 1600 in the El Congo microbasin. Through the use of statistical algorithms in R language and databases in geographic information systems, this paper seeks to present how network analysis can provide information on settlement patterns at a regional scale and how the spatial distribution of small local and supralocal communities, together with their social interaction networks, allows an evaluation of the strength and direction of relationships between social units in economic and political terms. Using quantitative methods oriented to investigate measures of centrality, this paper also aims to be a case study for archaeological research regarding the emergence of chiefdom communities in the Intermediate Area, by pointing out how network analysis in archaeology and the study of settlement patterns allows the identification of demographic centers that originated complex socioeconomic relationships that determined decision-making in precolumbian chiefdom communities.

Southerly, Chris [154] see Cranford, David

Southern, Megan (University of Otago), Sian Halcrow (University of Otago) and Claire Cameron (University of Otago)

[115]

Maternal Marginalization and Infant Mortality in Dunedin, New Zealand, 1850–1940

New Zealand was the “poster child” for relatively low infant-mortality rates in the nineteenth and early twentieth centuries compared with other OECD countries; however, little is known about how social disadvantage may have increased the mortality rates for marginalized groups. We investigate the causes of death and age at death of infants (one year of age and younger) of married and unmarried mothers buried in the two main cemeteries of historic Dunedin (Northern and Southern Cemeteries) between 1850 and 1940 using death records. Of 4,653 burials, 354 (7.6%) were born to unmarried mothers. This is higher than expected as the ex-nuptial birthrate hovered around 4% at this time. Causes of and age at death differ between the babies of married mothers and babies of unmarried mothers. The inextricable link of infant and maternal health meant that babies born to unmarried mothers may have had poorer health outcomes than babies born to married parents. We argue that unmarried mothers faced structural violence in colonial New Zealand through official legislation and social structures preventing equitable access to the care and support necessary to provide a healthy life for their child.

Southern, Megan [246] see Halcrow, Sian

Spahr, Tim (Cape Porpoise Archaeological Alliance), Arthur Anderson (University of New England), Gabriel Hrynick (University of New Brunswick), Gemm-Jayne Hundgell (Northeast Archaeology Research Center) and Arthur Spiess (Maine Historic Preservation Commission)
[154]

A Report on a Late Woodland Period Dugout Canoe from Cape Porpoise, Maine, USA

In 2018, the Cape Porpoise Archaeological Alliance (CPAA) located a dugout canoe during a surface survey of the Cape Porpoise tidal flats in Kennebunkport, Maine. A sample of the canoe dated to between 1275 and 1380 cal AD making it the oldest known from the region. Professional archaeologists and volunteers excavated the canoe from the intertidal in the summer of 2019 for analysis and conservation. This research provides new insight into precontact watercraft technology in the Far Northeast and emphasizes the promise of citizen science initiatives for identifying and recovering delicate archaeological materials that are exposed and under threat from rapidly changing coastlines.

Spahr, Tim (Cape Porpoise Archaeological Alliance)**[317]***Discussant***Spanbauer, Jeffrey (Illinois Valley Community College)****[153]***Cultural Identity and Remembrance at “French” Fort Chartres*

Built between 1754 and 1765 in southern Illinois, Fort de Chartres has been interpreted as a French settlement in historical and archaeological interpretations and reconstructions. This continues to be the case, despite a large British garrison and attached civilian workforce and traders who have been erased or villainized. This obscures any nuanced discussions of identity and the cultural affiliation of material goods, and flies in the face of a rich British documentary record that illuminates quantities, styles, and producers of these goods. As such, previous interpretations of the cultural affiliation of artifacts are compromised, and a recent reexamination of the assemblage suggests a better proxy argument for a British affiliation, especially when considering the impacts of geography, trade, and historical events. This assemblage, when corroborated with documents, reveals the intricate negotiation of identity that emerges from intersectional categories that aim to parse a culture of production of materials from a culture of use.

Spangler, Jerry [20] see Baka, Abby

Spangler, Jerry [198] see Medina, Ishmael

Sparacello, Vitale [246] see Riel-Salvatore, Julien

Speer, Charles (Idaho State University) and Stance Hurst (Texas Tech University)**[86]***Folsom Hunter-Gatherers May Have Ignored Local Raw Material Sources*

The Adair-Steadman Folsom site (41FS2) functioned as a lithic workshop and campsite between 10,800 and 10,300 RCYBP and is situated ~5 km away from an Edwards chert quarry (41FS12) in the Southern Plains. This research aims to determine potential sources of Edwards chert Folsom artifacts at Adair-Steadman through LA-ICP-MS. The outcomes of this study, combined with a technological investigation, may yield valuable insights into Folsom mobility patterns. A previous investigation into the Adair-Steadman Folsom preforms (130), channel flakes (287), and projectile points (58) suggested knappers were gearing up for future hunts. A minimum analytical nodule analysis determined that knappers were likely not using the quarry at 41FS12 for the manufacture of Folsom projectile points. However, a preliminary assessment of the geochemical analysis of Adair-Steadman artifacts combined with previous research at 41FS12 suggests that Folsom knappers may have utilized Edwards chert from alternative sources potentially 50 km or further away. The selection of nonlocal Edwards chert sources may fit within other Folsom knapper constraints of landscape and ecological zones and/or raw material quality encountered during logistical forays. This is to be confirmed by comparison of geochemical data from raw material and artifacts from 41FS12 with the Adair-Steadman artifacts.

Speller, Camilla [135] see Conlan, Christine
 Speller, Camilla [215] see Hopper, Courtney
 Speller, Camilla [183] see Thornton, Erin

Speller, Jeffrey (Durham University), Karen Milek (Durham University), Kathryn Catlin (Jacksonville State University) and Douglas Bolender (University of Massachusetts, Boston)
[48]

Kotið: An Integrated Geoarchaeological Investigation

The site of Kotið, in Skagafjörður, northern Iceland, consists of several interposed components ranging from medieval outbuildings to a small dwelling from the first period of settlement in the region (ca. 870–930 CE). To understand how the inhabitants of Kotið constructed and reconstructed the buildings there and impacted site deposits (both inside as well as outside of formal structures), an integrated geoarchaeological project has been initiated employing diverse methodologies ranging from soil coring to soil micromorphology to geochemical analysis. This poster presents the preliminary results of the geoarchaeological investigations at Kotið.

Spenard, Jon (Cal State University San Marcos), Mike Mirro (Chronical Heritage) and Javier Mai (Rio Frio Regional Archaeological Project)
[164]

The Buffalo Hill Quarries Site: Investigations of an Ancestral Maya Quarryscape in the Mountain Pine Ridge Forest Reserve, Belize

The Rio Frio Regional Archaeological Project (RiFRAP) 2022 Mountain Pine Ridge Forest Reserve regional survey resulted in documentation of the Buffalo Hill Quarries (BHQ), the first recorded ancestral Maya granitic rock quarry with a ground stone implement workshop site. Preliminary investigations indicate a complex multicomponent quarryscape with extraction pits and cut faces surrounded by debitage piles spread out over an area of at least 16 ha. Debitage piles contained discarded items, granite flakes, preforms, and production tools, including quartzite hammerstones. Regional aerial lidar data later received revealed the BHQ is at least three times larger than our initial surveys indicated, and that two other multicomponent quarry sites are in the region. Our RiFRAP returned to the BHQ in the 2023 season to ground truth the lidar results and to conduct systematic excavations of a quarry pit to investigate extraction techniques. Results confirm the site is approximately 45 ha in size, but many components are invisible in the lidar data, indicating the need to employ multiple remote sensing solutions and fieldwork for documenting such sites. We also present findings of our investigations into how granitic rock was quarried and survey results identifying the raw material source for hammerstones.

Spenard, Jon [251] see Moyes, Holley

Spencer, Jessica [272] see Best, Kaleigh

Spencer-Wood, Suzanne (Oakland University; Harvard University)
[129]

Discussant

Spencer-Wood, Suzanne (Oakland University; Harvard University)
[153]

Colonialist Biases in Historical Markers in Detroit

Applying a feminist intersectionality theoretical perspective in close readings of historical markers in Detroit reveals their intersecting colonialist racist and sexist biases. Of Detroit's 265 historical markers, 89% include men, 63% include White men, but only 26% include women, of which 71% are White. Native American men

are included on 6% of Detroit's historical markers, none of which mention Native American women. The biases show that these historical markers were very predominantly erected by Euro-American men from the viewpoint of European male colonists. The historical markers at colonial sites are very predominantly about White European men at military sites, religious sites, and home sites of enslavers. The few historical markers that include Native Americans mostly commemorate battles they lost, or mention land Native Americans "sold" to White men. These historical markers justify the conquest and settlement of the land by Europeans and the forced removal of most of the Native Americans to reservations further west. Very few White women are mentioned on historical markers for colonial sites, including Cadillac's wife and the wife of a slave owner. Suggestions are made for the inclusion of more information about minorities and women, especially Native Americans, on existing or new historical markers.

Spengler, Robert (Max Planck Institute for the Science of Human History)

[132]

Domesticating Earth: Rethinking the Origins of Agriculture

The origins of agriculture have long been depicted as one of the greatest innovations of humanity, a humanist approach that rose to prominence in archaeology during the latter half of the twentieth century. During this time, a wide range of push and pull models for the origins of agriculture were developed, all of which were formulated as responses to the question of "why humans invented farming." This conscious view of agriculture continued to dominate discourse despite scholars, such as David Rindos, presenting coherent alternative narratives, which relied on ecological principles. Over the past 20 years the prevailing views have drastically changed, and in 2009, Dorian Fuller declared that a paradigm shift was under way. Despite the recognition of an overarching change in views, there have been few discussions regarding what this new "paradigm" entails and what aspects of the origins of agriculture debates should be rejected or retained. While most of the scholars embracing the ecological perspective would agree that the process was unconscious and protracted, discussions over the great why question still persist. In this talk, I will look at some of the assumptions that persist from the view of farming as a great innovation.

Sperling, Stephanie (Calvert County Dept. of Parks & Recreation)

[64]

Discussant

Spies, Maximilian [236] see Sealy, Judith

Spiess, Arthur [154] see Spahr, Tim

Spivey, Maggie [24] see Kidder, Tristram

Sportman, Sarah (Connecticut Office of State Archaeology, University of Connecticut), David Leslie (TerraSearch Geophysical LLC) and Kevin McBride (University of Connecticut)

[311]

"Half-way up a hill, at the foot of which we camped": Archaeological Investigations of the 1781 Rochambeau Camp #5, Bolton, Connecticut

In 2023, the Connecticut Office of State Archaeology directed a new archaeological investigation of the 1781 Rochambeau Camp #5, in Bolton, Connecticut, as part of the Connecticut State Library's Digging into History Program for high school students. Camp #5 is one of several stops along the route taken by French forces under the command of Jean-Baptiste de Rochambeau, as they made their way across Connecticut and into New York to join the Continental Army before proceeding to Yorktown, Virginia. The Camp #5 site,

now a town preserve, was historically used as farm and pasture land, and retains much of its eighteenth-century character. An archaeological metal detecting survey conducted the 1990s identified a scatter of military artifacts, demonstrating the site's potential. The current archaeological investigation included geophysical survey, metal detecting, and limited excavations. Despite extensive plowing in the nineteenth and twentieth centuries, much of the camp site appears to be intact. Metal detecting identified concentrations of artifacts, including regimental buttons, tools, and personal items and the remote sensing work identified the truncated remains of several likely camp features. The results suggest that a combination of survey techniques provides the strongest methods for documenting and interpreting such short-term military sites.

Springer, Kathleen [35] see Reynolds, Sally

Spros, Rachel (Vrije Universiteit Brussel, Belgium), Bart Lambert (Vrije Universiteit Brussel, Belgium), Barbara Veselka (Vrije Universiteit Brussel, Belgium), Philippe Claeys (Vrije Universiteit Brussel, Belgium) and Christophe Snoeck (Vrije Universiteit Brussel, Belgium)
[334]

The Calamitous Fourteenth Century and Its Influence on the People: A Case Study from Ypres, Belgium

During the fourteenth century in Europe, challenges like climate change, crop failures, and the plague affected the people significantly. Such events bore great consequences for people's health and their everyday lives forcing them to adapt. The inhabitants of Ypres, present-day Belgium, were no exception. During the high medieval period (eleventh–thirteenth centuries), the city expanded into one of the largest in northwestern Europe. Yet, during the fourteenth century, natural disasters and sociopolitical unrest resulted in a strong population decline and lifestyle changes. Multi-isotope analyses on human remains document human past and provide information on people's health, movements, and social interactions. However, as historical sources are not always available or difficult to interpret, connecting isotope data to historical events remains challenging. How to link information from isotopes to other disciplines such as environmental, medical, or archaeological studies, and how to improve future studies? Over 1,500 multi-isotope datapoints obtained from 185 humans and 52 animals from medieval Ypres are discussed in their historiographical context. Their implications are not only relevant for the medieval population of Ypres but also for isotope analyses studies in general.

Stabile, Rafael (Instituto de Pesquisas Científicas e Tecnológicas do Estado do Amapá), Veronica Wesolowski (Universidade de São Paulo) and Anne Rapp Py-Daniel (Universidade do Oeste do Pará)

[54]

An Overview of Ancient Funerary Practices in Oriental Amazonia: A Regional Bioarchaeological Approach for Amapá, Brazil

Archaeology and ethnology have shown that the relationship between the living and the dead in Amerindian societies in Amazonia is a fundamental element for understanding their lifeways in the past and present. Archaeological research on funerary practices in the Amazon region has revealed a variety of body treatments and burial patterns over the last 2,000 years. In the coastal region of Amapá (Brazil), this diversity is evident in the human burials constructed across different landscapes, in natural or artificial monuments, with ceramics of different styles. The ongoing research aims to identify the spatial distribution and the patterns in archaeological human burials to provide a comprehensive overview of funerary practices in the region through the analysis of the deposition patterns of human skeletons at archaeological sites in three regions of Amapá: (1) Atlantic coast, (2) estuarine coast and the mouth of the Amazon River, and (3) southern inland. We excavated burial urns at the laboratory and analyzed the human remains and associated artifacts to provide an initial description and characterization. The data produced so far confirms that the precolonial cultural diversity in the region—often associated with the abundance of archaeological ceramics—is also observed in the funerary practices.

Stafford, Thomas [94] see O'Grady, Patrick

Stahl, Ann (University of Victoria)

[250]

Discussant

Stalla, David [42] see Mahan, Samantha

Stamer, Julianne (School of Human Evolution and Social Change, Arizona State University), Jessica Rothwell (School of Human Evolution and Social Change), Kelly Knudson (School of Human Evolution and Social Change) and Jane Buikstra (School of Human Evolution and Social Change)

[241]

Investigating the Residential History of the Esplanada Mass Graves at Phaleron, Greece

Cemeteries are spaces in which social and political identities are publicly negotiated between the living and the dead. Three mass graves, termed the “Esplanada,” at the Phaleron cemetery, Greece, are a clear and public statement that has captured significant attention since they were first uncovered. A total of 79 individuals were buried in long rows and bound with metal shackles, calling into question who they were, where they came from, and why they were given nonnormative burial treatment. This study investigates the residential history of 47 of these individuals using strontium isotopes ($^{87}\text{Sr}/^{86}\text{Sr} = 0.709777$, standard deviation = 0.003944) and proposes a novel method for interpreting radiogenic strontium results to better handle the complex geological variability in the Aegean. From the bioavailable range of values, the authors generate a probability that individuals in the study spent their early life in this area, allowing for an estimation of locality when bioavailable strontium ranges overlap between adjacent areas. Each individual will have a likelihood of locality assigned that will aid in determining residential history. Refining the interpretation of strontium isotopic values by adding probability will thus enable more nuanced interpretation of the mobility and social identities of those buried in the mass graves at Phaleron.

Stanish, Charles [306] see Flores-Blanco, Luis

Stanish, Charles [299] see Roman Vargas, José

Stansbury, Kathleen [211] see Edmonds, Emily R.

Stantis, Chris (University of Utah), Lesley Chesson (Defense POW/MIA Accounting Agency [DPAA]), Kirsten Verostick (University of Utah), Gregory Berg (DPAA) and Gabriel Bowen (University of Utah)

[337]

Testing and Improving Interlaboratory Comparability of Tooth Enamel Carbonate Isotope Analyses

Carbon and oxygen isotope ratios of human tooth enamel carbonate are frequently used to reconstruct past diet, movement, and environmental conditions. Despite a long legacy of research, samples are prepared and analyzed using a remarkably broad range of protocols, and this methodological heterogeneity raises questions about the comparability of isotopic data across studies. We report a systematic comparison of isotope delta (δ) values for 10 “modern” faunal teeth (obtained from field recoveries) measured in two different laboratories. Our tests included comparisons of enamel powder subsamples that were chemically pretreated using commonly adopted protocols and subsamples that received no pretreatment. We also evaluated δ values generated with and without (1) standardizing the reaction temperature used during isotope ratio mass spectrometry and (2) baking the samples and vials to remove moisture before analysis. The results showed that δ values from the two

laboratories were systematically different when samples were chemically pretreated, but that differences were smaller or negligible for untreated samples. Standardization of reaction temperature and baking also improved comparability. We suggest that the widely adopted practice of oxidant and acid pretreatment of enamel samples is largely unnecessary and may compromise the accuracy of stable isotope analyses.

Stantis, Chris [243] see Heaney, Christopher

Stanton, Patrick [272] see Ciolek-Torello, Richard

Stanton, Travis [303] see Hutson, Scott

Stanton, Travis [321] see McAvoy, Scott

Stark, Barbara (Arizona State Univ) and Wesley Stoner (University of Missouri Research Reactor [MURR])

[216]

Gulf Ballgame Viewership: The Ballgame and Center Functions

In south-central Veracruz, higher-level centers during the Classic period had ballcourts. The prevailing “low-density urbanism” and a distributed urban network pose challenges for sociopolitical integration. How well did the ballgame accommodate at least nearby populations and contribute to social integration? We examine test cases to assess viewership versus population. Previously we compared game viewership to the people accommodated in the central plaza. Here we ask a different question: how well did viewership serve the immediate surrounding population? We then compare the ballgame to other urban services in Gulf centers.

Stark, Miriam (University of Hawai'i at Manoa), Mitch Hendrickson (University of Illinois, Chicago), Piphai Heng (University of Hawai'i, Manoa; UCLA) and Alison Carter (University of Oregon)

[56]

Place-Making, Fire, and the Praxis of Becoming Angkor

The ninth- to fifteenth-century Angkorian state was premodern Southeast Asia's earliest large-scale collective, and its roots extend back to an early first-century CE polity described as Funan, and then to a confederation of successor states called Chenla. Place-making was intrinsic to Angkorian rulership: rulers formalized transportation and communication routes linking the capital to its peripheries and inscribed their acts on sandstone stelae embedded in state monuments. Angkor's capital swelled to 750,000–900,000 residents at its twelfth- to thirteenth-century peak, yet Angkorian citizenship did not require urban residence at the capital. Multisite archaeological fieldwork across Cambodia suggests instead that Angkorian Khmers constructed state places through their monuments and intangible sites of memory. Ritual practice in the Angkorian world merged indigenous animist beliefs with Brahmanical and Buddhist ideologies to require new ways of moving through the Angkorian world and harnessing pyrotechnologies to produce and use iron goods (including architectural) and stoneware ceramics across the empire. This paper explores how Angkor's citizens engaged with deeply historized places, transitioned local tutelary spirits in small shrines to sculpted gods in sandstone temples, and created a sense of collective belonging through the manufacture and consumption of unique objects forged through fire.

Stark, Robert (University of Waterloo & Polish Centre of Mediterranean Archaeology), Robert Mahler (Polish Centre of Mediterranean Archaeology) and Artur Obluski (Polish Centre of Mediterranean Archaeology)

[95]

Assessing Mobility among the Medieval Makurian Individuals Interred in Crypts 1–3 on Kom H at Old Dongola, Sudan

As the capital of the medieval Kingdom of Makuria, in what is today Sudan, Old Dongola was a central location of administration and culture; Old Dongola was also the seat of a bishopric. Such factors would have made Old Dongola a key location for mobility, with various pull factors from economic, social, and religious, including monastic. Numerous questions remain about the population of medieval Old Dongola and mobility to the site. During excavations of the monastery on Kom H at Old Dongola, three burial crypts (Crypts 1–3) were uncovered. The identification of the epitaph of an archbishop Georgios in proximity to these crypts suggests that Georgios may have been interred in one of the crypts along with other, likely, social elites of Dongolan society. The use of Crypts 1–3 on Kom H bring forth questions about burial space use and mobility among different social segments in Makurian society. This study presents the results of strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) isotope analyses of dental enamel from 19 individuals buried within these three crypts to assess potential mobility to the area of Old Dongola.

Stauffer, John (Choctaw Nation of Oklahoma)

[328]

Assessing the Nature and Pace of Platform Mound Construction in Cahokia's Ramey Field

First detected by Charles Bareis in 1969 in Cahokia's Ramey Field tract, Mound 17 (the Bareis Mound) was partially exposed beneath artificially mixed plaza fills, immediately west of the palisade wall that bounds the eastern extremity of the site core. Following an analysis of Bareis's collections from the 1969 field season in 2019, two consecutive field seasons were undertaken to understand the nature, timing, and spatial extent of Mound 17's construction. Using multiple geophysical prospection methods, soil probing, targeted excavations that expanded from Bareis's original trenches, micromorphological sampling, Bayesian modeling of sampled AMS dates, and the analysis of contextually associated artifacts, Mound 17's construction sequence was determined with attention to micromorphological clues and Bayesian modeled AMS dates, in order to accurately assess the cultural context and pace of mound construction between the eleventh and twelfth centuries CE. Bayesian modeled AMS dates indicate a 19-year construction span for Mound 17, and micromorphological thin sections that lack evidence of construction surface weathering indicate that construction occurred within a few weeks. Considering experimental labor estimates and local meteorology in west-central Illinois, Mound 17's construction is evaluated as a punctuated event in Cahokia's history, repeated at varying scales during Cahokia's overall occupation.

Stebbins, Jaelyn (Minnesota State University, Mankato)

[183]

Plants and Environment: A Paleoethnobotanical Analysis of the Vosburg Site (21FA002)

Recognized archaeologically by their distinct material culture, Oneota sites exist in many ecological zones across the Upper Midwest. Consequently, the sites are hardly homogenous. Across localities, Oneota groups are recognized as late Precontact food producers who grew *Zea mays* (maize), *Cucurbita pepo* (squash), and later *Phaseolus vulgaris* (bean). The utilization of other wild and domesticated botanical resources across localities is not as well documented. While extensive paleoethnobotanical analyses have been completed for the late Precontact period in southeastern Minnesota and southwestern Wisconsin, little is known about plant utilization by Oneota groups on the Minnesota prairie. The Vosburg site (21FA002) is a late Precontact (ca. 1300–1400 CE) Oneota site located within the woodland-prairie transitional ecotone of Minnesota. The macrobotanical remains from half of a large, culturally significant feature from the Vosburg site were analyzed and compared to those of previous paleoethnobotanical studies from contemporaneous Oneota sites in the Upper Midwest. Moreover, this study provided a more accurate understanding of the environment of southern Minnesota ca. 1300–1400 CE. This study is a significant contribution to archaeologists' limited understanding of diversity in Oneota plant assemblages and of the Blue Earth phase of Oneota in southeastern Minnesota.

Steere, Benjamin (Western Carolina University)**[124]***Heritage Management at the Cherokee Town of Noquisiyi (Nikwasi) in Franklin, North Carolina, USA*

The Noquisiyi or Nikwasi Mound, a monumental earthen platform mound located in the town of Franklin, North Carolina, was first constructed during the Mississippian period (AD 1000–1600) and marks the location of an important Cherokee mother town. In this paper I consider the history of the preservation of the mound as a case study in the evolution of cultural heritage preservation in the ancestral Cherokee territory of western North Carolina. Drawing on insights from Indigenous studies, I suggest that the town of Franklin initially preserved and interpreted the site as monument to Cherokee absence, rather than a symbol of Cherokee resilience. This narrative still haunts current discussions about the site. However, recent efforts at more collaborative interpretations of Noquisiyi, which include the use of concepts from Cherokee language and cosmology and frequent visits to the site by Cherokee cultural organizations, provide examples of a more expansive and equitable concept of heritage. Those involved in the preservation and interpretation of Noquisiyi have an opportunity to reclaim the site as an active part of the Cherokee cultural landscape, but doing so will require all involved to push back against archaeological interpretations that separate living Indigenous people from their past.

Steeves, Paulette (Algoma University)**[7]***Discussant***Steeves, Paulette (Algoma University)****[258]***Weaving Paths to Healing and Human Rights: Creating Tsunamis of Systemic Change in Archaeology*

Substantive practices for a just future in archaeology require an acknowledgment of the history of discrimination and marginalization within American archaeology. Equity is not achieved through policies supporting marginalized communities within the discipline. Substantive practices and equity are addressed through action. Discrimination within archaeology against marginalized groups includes both settler and Indigenous populations. Transformation of an academic field begins with discussion, including testimony from impacted communities to the harms inflicted by systematic discrimination within the field. If we are to create a just and equitable future in archaeology, we must first listen to marginalized people and communities and together weave paths to healing and transformation within archaeology and the communities whose histories and lands are central to the work archaeologists do. From an Indigenous perspective and lived experience, I discuss the harms inflicted on Indigenous communities and on settler archaeologists whose work leapt beyond the enforced time frames of the initial peopling of the Western Hemisphere (the Americas). It is an honor to acknowledge archaeologists who suffered the wrath of the archaeological status quo and to acknowledge the groundbreaking work they have done over the last century, supporting deep Indigenous links to the lands of Turtle Island.

Stein, Julie (University of Washington)**[304]***Discussant*

Steinbach, Erik [281] see Phillips, Bruce

Steinberg, Jonah [6] see Koutrafouris, Vasiliki

Steinke, Katharine [42] see Hamilton, Derek

Steinwachs, Erin [269] see Riccio, Jordan

Stelson, Laura [268] see Jennings, Madeline

Stemp, W. James (Keene State College), Rachel Horowitz (Washington State University) and Scott Simmons (University of North Carolina, Wilmington)

[251]

Maya Lithic and Metal Technologies in Belize

Over more than a century, archaeological research in Belize has contributed greatly to our understanding of past Maya stone and metal technologies. From the preceramic through the colonial periods (~11,000 BC–AD 1700), the analysis of flaked and ground stone tools recovered from excavations in Belize has provided critical insights into Maya subsistence and socioeconomic and ideological behavior, while incorporating studies about raw material sources, quarrying, tool production, trade and exchange, tool function, ritual, and symbolism. In contrast to the ubiquity and longevity of stone tools in the archaeological record of Belize, metal objects appear in small quantities and at select sites relatively late in time (ca. AD 1200/1250–1700). Metal never “replaced” stone at Maya sites, and because Belize has no known metallic ore deposits, copper-based ornaments rather than tools were either imported from elsewhere in Mesoamerica or they were produced by recycling metal objects that had been imported earlier in time. Here we provide an overview of the major themes addressed in lithic and metallurgical studies in Belize, with an emphasis on the contribution of lithic studies in Belize to understanding big picture questions about resource acquisition, tool use, and socioeconomic and ideological behaviors throughout the Maya region.

Stemp, W. James [126] see Horowitz, Rachel

Stephen, Jesse [198] see McCray, Brian

Stephens, Jay (University of Missouri, Archaeometry Laboratory, Research Reactor Center)

[121]

Chair

Stephens, Jay (University of Missouri, Archaeometry Laboratory, Research Reactor Center), David Killick (University of Arizona) and Shadreck Chirikure (University of Oxford)

[121]

White Iron and Red Gold: How to Identify Tin, Copper, and Bronze Derived from Rooiberg Mineral Deposits, South Africa

Tin and copper ores around Rooiberg, South Africa, were exploited from 1000–1300 CE until about 1840. Geologists estimated that around 1,000 tons of the tin mineral cassiterite, equivalent to 792 tons of metallic tin, were mined there. Archaeological survey showed only a small amount of evidence for tin smelting near Rooiberg. Therefore, the ore deposits appear to have been an open resource, with tin carried away to sites near and far for smelting. Isotopic and chemical analysis of bronze and tin metal from archaeological sites across southern Africa has established that Rooiberg was the primary source of tin for the manufacture of bronze in South Africa, Botswana, Zimbabwe, and southern Zambia (the latter about 800 km from Rooiberg). Missing from this discussion is the possibility that copper was also moved long distances from Rooiberg. In this presentation, we establish the isotopic and chemical signature of copper from Rooiberg. Our results prove that copper from Rooiberg was distributed around the region, and we use these data to reconstruct networks of mobility and interaction in the southern African Iron Age.

Stephens, Jay [121] see Haecker, Charles

Stephens, Jay [121] see Johns, Sherman

Sterling, Kathleen (Binghamton University)**[124]***Vive la différence? Comparing American and French Approaches to Heritage*

What do archaeologists mean when we talk about heritage? That depends in large part on our often-shifting positionality within broader heritage discourses. Western archaeologists often investigate what we might describe as our own heritage as well as that of others, both within our own nations and elsewhere. When we discuss “heritage” in the United States, it is often with a feeling of personal and patriotic connection to the past. Heritage work is about stewardship, pride, protection, and specific kinds of expertise for the benefit of all. France provides a complementary and contrasting example. The United States and France are both Western states that share a standpoint of national exceptionalism, and we point to our histories to justify that. Both nations have World Heritage sites within their borders. However, the differences between a settler-colonialist state and a colonial state, coupled with very different racial dynamics, means that American heritage and French *patrimoine* bear only superficial resemblance to each other for the producers and consumers of archaeology, arts, and history.

Sternberg, Robert**[218]***Chair***Sternberg, Robert and Alessandra Pecci (ERAAUB, IAUB, INSA-UB, Universitat de Barcelona)****[218]***Luis Barba: 2024 Fryxell Award for Interdisciplinary Research Honoree*

Luis Barba is the 2024 Fryxell Award honoree, in recognition of his excellence in interdisciplinary research contributing significantly to American archaeology. Luis started his career with academic degrees in chemical engineering, geology, and anthropology. His research interests and over 200 publications focus on archaeogeophysical prospection, chemical residues on archaeological floors and vessels, and the integration of multiple noninvasive geospatial datasets indicative of human activity. He has worked extensively in Mexico but also in Spain, Chile, Turkey, Italy, and Israel. He has done much to strengthen the infrastructure of archaeological science within Mexico and elsewhere. He was a co-organizer of the biannual International Symposium of Archaeometry (ISA) in Mexico City in 2000 and was also on the local organizing committee of ISA 2018 in Mérida. He has served on the Standing Committee of the ISA since 2000 and has been a longtime chairperson of the field techniques symposia. He was head of the Applied Sciences Network for Cultural Heritage Research and Conservation (Mexican National Council for Science and Technology). Luis Barba has participated in many international collaborations. He has mentored a bevy of younger colleagues and students. All of this was done with professionalism, collegiality, creativity, and a joyful work ethic.

Sternner, Katherine (Towson University)**[228]***Chair***Sternner, Katherine (Towson University)****[228]***Use and Sources of Ohio Hopewell Fossil Shark Teeth*

Fossil shark teeth recovered from Ohio Hopewell sites represent a quintessential example of an exotic good representative of the Hopewell Interaction Sphere. As with most artifacts, the primary questions asked of fossil shark teeth in archaeological contexts are (1) what were they used for and (2) where did they come from? Answers to date are that these objects were primarily decorative or catch-all ceremonial in function, with more recent consideration of additional utilitarian functions. Several sources have been considered for fossil shark teeth recovered from Ohio archaeological sites: the lower Mississippi Valley, Florida, the Gulf Coast, the Carolinas, and the Chesapeake Bay region. Sourcing evidence typically relies on factors such as proximity to the proposed sources, the presence/absence of other participants in the Hopewell Interaction

Sphere, the presence of Ohio-sourced materials in the proposed shark tooth source location, the presence of waterways for transportation, and proximity to fossil shark teeth. This study applies use-wear analysis to samples of fossil shark teeth from Florida, Ohio, and the Chesapeake Bay, to determine if teeth were used in a similar manner between regions, and if such overlap may indicate the primary source of Ohio fossil shark teeth.

Sterrett-Krause, Allison (College of Charleston) and Laure Dussubieux (Field Museum of Natural History)

[50]

Glass Windows and Vessels from Bir el Knissia, an Early Byzantine Church in Carthage

Excavations at the site Bir el Knissia in Carthage from 1990 to 1992 recovered large glass assemblages from the site of an early Byzantine cemetery basilica, constructed by the mid-sixth century CE and destroyed by fire in the mid-seventh century. These artifacts include vessels (especially lamps, beakers, and goblets) and substantial quantities of glass windowpanes. Visual examination of glass coloration reveals significant differences among vessels, equally distributed between colorless, light green, and bluish-green glass, and the windowpanes, made overwhelming of bubbly bluish-green glass. Elemental analysis of approximately 100 glass vessels and windowpane fragments has been carried out to elucidate the reasons for the variation between the vessels and the window panes. We present preliminary results of analysis from Bir el Knissia and consider the implications for glass trade, glass workshop organization, and glass recycling in early Byzantine Carthage.

Stevens, Chloe

[189]

A Geoarchaeological Investigation of an Early Holocene Soil Feature at the Page-Ladson Site (8JE591)

Florida State's 2022 field school excavated into Page-Ladson's stratigraphic unit (SU) 5, a stratum that spans the terminal Pleistocene and early Holocene with Bolen period occupation and exposed a sediment feature. It was unclear if the feature was cultural or natural. The soil transition was diffuse but there was an increase in charcoal and faunal content. Limestone and wood were ambiguously scattered. Several Late Paleo/Early Archaic projectiles surrounded the feature. This research reconstructs the environmental context of this early Holocene feature and associated SU and determines its cultural or natural origins. Several geoarchaeological methods were employed to identify whether this soil feature is the result of a cultural or natural process with two possible conclusions: the feature is a hearth or a natural water feature. The materials around the soil feature are reminiscent of a hearth, but no materials were visibly thermally altered. An alternative explanation is that the arrangement of materials are the result of a debris line at the margins of a pond. The following methods were applied: $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ isotopic analysis, Loss on Ignition, Magnetic Susceptibility, pollen analysis, and faunal, charcoal, and lithic distribution. The results indicate that this is a cultural burn feature.

Stevens, Craig (Northwestern University)

[47]

Chair

Stevens, Craig (Northwestern University)

[47]

Augmented Curiosities: Virtual Play in African Pasts and Futures

Technologies inspire the creation of new subjectivities—changing our points of perspective and augmenting the ways in which we perceive. Through our ever-expanding applications of innovation, humans recontextualize realities. We use the tools of the present to formulate our visions of the future and our understandings of the past. Along these explorations of meaning, we apply interfaces of magic upon the seemingly mundane to educate and entertain. *Augmented Curiosities* engages our technological entanglements through the emerging, immersive, and experiential visualization techniques of augmented reality (AR) and

virtual reality (VR). Critiquing the colonial dynamics of the “cabinets of curiosity,” which significantly influenced Western museum practices, *Augmented Curiosities* provides opportunities for intimate and playful interactions with African material culture from Northwestern University’s Herskovits Library of African Studies Collection. Through this digitally tactile experience, we exhibit synergies of the technical and the tangible as a community-oriented framework for future museum curation.

Stevens, Craig [327] see Bloch, Lindsay

Stevens, Karen (University of Kentucky)

[82]

I Know as I Relate: Reimagining Relationships of the Deep Past

Framed within Eurocentric materialism, economic theory of the deep past has largely formed a world of “natural resources” ready for extraction, exploitation, and management. Conversely, Indigenous-based economies of North America-Turtle Island widely see an animate universe in which all creations have agency and tradition all their own. Such economies are place-based, relation-based, and future-based, with many added values that are neglected in neoclassical economic theory. In this paper, I begin the process of reimagining Indigenous Peoples’ relationships with beyond humans (i.e., Plant and Animal Persons) in the Deep Past of the Archaic period. I examine how various Indigenous groups observed their social brothers and sisters, like Tree- and Deer-Persons, and worked to maintain relationships with these beings for millennia.

Stewart, Basil (Grave Creek Mound Archaeological Complex)

[72]

NAGPRA Practice as Death Work: Determining a Need for Grief-centric Training for NAGPRA Practitioners

NAGPRA practice entails working with death. This occurs when practitioners are engaging with the Dead, the circumstances of their occurrence in collections, and the wider scope of systemic violence that prompted the need for NAGPRA. NAGPRA practice is a type of death work. However, in the institutions that comply with NAGPRA, practitioners do not receive preparation to cope with their own grief brought on by their work or the grief of their Native American partners. Meaningful NAGPRA practice involves interpersonal relationship-building and interactions that broach potentially traumatic conversations. Having a foundation in grief-centric training would allow NAGPRA practitioners to not only practice self-care in their own work but also amplify the pursuit of healing which is the spirit of NAGPRA. This study surveyed NAGPRA practitioners, individuals who are responsible on some level within their institutions for the implementation of NAGPRA. Using likert scales, the participants were prompted with questions about the relationship between their practice and grief, their confidence and ability in approaching the grief of their tribal partners, and their perceived need for additional training that is grief-centric. The results help estimate a need for grief-related training or preparation for NAGPRA practitioners.

Stewart, Brian (University of Michigan)

[225]

Chair

Stewart, Brian (University of Michigan), Genevieve Dewar (University of Toronto Scarborough), Mike Morley (Flinders University), Andrew Carr (University of Leicester) and Kyra Pazan (California State University, Stanislaus)

[225]

The Middle Stone Age Goes Alpine: Preliminary Results of New Excavations at Ha Soloja Rockshelter, Lesotho, Africa

While settlement of the world’s high plateaus represents a final chapter in *Homo sapiens*’ global colonization, there were surprisingly early dispersals into high mountain systems. Africa possesses evidence for an early hominin presence in such settings, yet the processes by which human-highland engagements unfolded remain

obscure. This paper introduces a new project to understand when, why, and how humans began exploiting southern Africa's highest mountain system, the Maloti-Drakensberg. We present the preliminary results of renewed excavations at Ha Soloja (2,300 m asl), a large rockshelter in the uplifted Sehlabathebe region of southeastern Lesotho. We opened two new trenches at Ha Soloja, data from which form one prong of a multidisciplinary program of rockshelter excavation, paleoenvironmental reconstruction, landscape survey, and heritage valorization. From the uppermost levels we obtained infinite radiocarbon dates, suggesting the entire ~3.2 m Ha Soloja sequence predates ~50 kcal BP. The cultural material recovered is heavily dominated by flaked and fire-cracked stone artifacts. Low artifact densities, high rates of retouch, and abundant small flaking debris suggest that the site was recurrently a short-term logistical camp, lending preliminary support to our hypothesis that Ha Soloja functioned as a deep time high-altitude hunting station.

Stewart, Brian [55] see Dewar, Genevieve

Stewart, Caitlin [52] see Hemsley, Samuel

Stewart, Carlyn (New Mexico State Land Office)

[43]

Interpreting the History of Stolen Land: A Collaborative Project between the New Mexico State Land Office and New Mexico Highlands University

The New Mexico State Land Office (NMSLO) manages over nine million acres of land that was stolen from the Indigenous and Hispano peoples as a condition of US statehood. This land was allocated to New Mexico under the Ferguson Act of 1898 and the Enabling Act of 1910 in order to generate funding for schools and hospitals. While acknowledging this history, the NMSLO is devoted to the principle of stewardship and the responsible care of cultural resources. The establishment of the Cultural Properties Protection Rule and creation of a new division, the Cultural Resources Office, have increased protections and adhere to a complete avoidance practice. To highlight this shift toward caretaking management strategies and increased consultation with descendant communities, students from New Mexico Highlands University's Media Arts & Technology Department created interpretive materials for the public spaces in the NMSLO building located in downtown Santa Fe. This project contrasts the colonial beginnings of the land office with aspirations of the current administration.

Stewart, Carlyn [269] see Ortega, Ethan

Stewart, Haeden (University of Massachusetts, Amherst)

[325]

Toxic Taphonomy

We are living through an era that has been described as "the apotheosis of waste," a globe brimming with greenhouse gasses, mountains of tailings, lagoons of pig-shit, and hangars of acidic sludge. The massive scale and persistence of industrial waste has not only transformed the air, water, and soil that we live on, it has hijacked the taphonomic processes of decay. Rather than a process of undoing, the decay of industrial waste is toxic, uneven, and hidden. As it decays, industrial waste not only materially remakes the bodies, communities, and environments that live in its shadow, it transforms humanity's capacity to know and act in the world. Drawing from excavations of a 1930s mining community that lived downwind of lead tailings, this paper explores how the immigrant miners and their families lived were unevenly exposed to these tailings and their harms. Beyond focusing on the material harms themselves, I am interested in the ways these harms played at the limits of the legibility and in doing so unsettled the community's local practices of resilience in the face of exploitation.

Stewart, Rebecca (Brockington & Associates Inc.)**[324]***A Flash of Silver in the Swamp: The Identification of a B-24 Crash Site from World War II in the Lowcountry of South Carolina*

On Dec. 15, 1944, a B-24 took off on a night navigation mission from Chatham Air Field in Georgia, headed to Florida. The crew of nine were training to patrol the East Coast for enemy submarines. Fifteen minutes into the flight, engine #1 caught fire. The bomber crashed less than five minutes later into swampland in the Lowcountry of South Carolina. This paper discusses the identification of the crash site, the condition of extant wreckage found as part of an intensive cultural resources survey in 2021 and provides a narrative history of the incident based on information obtained in the Army Air Force crash report. This site highlights the significant loss of life which occurred within the US as a result of training accidents during World War II. It is an unusual archaeological site type, and it has few, if any, precedents within the southeastern US. Of the 561 fatal Army Air Force crashes recorded in South Carolina and Georgia during World War II, this is the first to be recorded formally as an archaeological site. Using Phased Aviation Archaeology Research (PAAR) methodologies adopted from the UK as a guide, the wreckage of Plane 42-50992 has been mapped, photographed, and analyzed.

Stilborg, Ole [173] see Thomas, Dayna

Stoessel, Luciana [77] see Belardi, Juan

Stojanowski, Chris**[241]***Phenotypic Perspectives on Biological Variation at Phaleron*

Phaleron is an important site in the history of ancient Athens and preserves a unique record of life in the past. One of the more compelling aspects of the site is the range of mortuary treatments documented there, including multiple groupings of nonnormative burials, a series of co-interments buried in shackles, as well as pit and jar burials. Given the variation of mortuary treatments, and in particular clear evidence of violent death for some individuals, one question to address is how these different burial subsets relate to each other in terms of biological variation. Dental morphological data were collected from approximately 600 burials using the Arizona State University Dental Anthropology System. These kinds of data have been repeatedly shown to reflect patterns of biological relatedness at different scales of analysis and serve as useful proxies for neutral genetic variation. As such, they complement more direct genomic approaches and generally use larger sample sizes and are nondestructive in their implementation. Data were cleaned using standard trait registration techniques and subjected to multivariate biological distance analysis. Patterns of variation are compared among Phaleron subgroups as well as with published data from other sites in Greece that reflect suitable broad-scale comparative outgroups.

Stojanowski, Chris [300] see Duncan, William

Stoker, Owen (University of Alabama), Cynthia Hannold (University of Alabama), Jonas Posey (University of Alabama), Nathan Patty (University of Alabama) and Kendall Holland (University of Alabama)**[282]***Flint on Flesh: Creating an Experimental Comparative Collection for Use-Wear Analysis of Holmul Region Lithics, Petén, Guatemala*

Use-wear studies have proven invaluable for understanding human interaction with lithic materials and organic materials that have not survived the archaeological record. Though recent investigations have begun to address gaps in Maya user-wear studies, archaeologists have not sufficiently explored stone tool use in the Maya area. This study includes an experimental component to examine flint and chert use on wood, bone,

plant material, shell, ceramics, animal meat and simulated human flesh, and an analysis of chert points from Structure 51, located on the main plaza of La Sufricaya, Guatemala. The results of experiments, with analyses, are presented with implications for future directions.

Stoll, Marijke (Indiana University)

[160]

Exploring High-Elevation Mobility in the Sierra Sur Mountains Past and Present

Much like their ancestors did in the past, people in the Sierra Madre del Sur mountains still travel largely on foot to reach places, such as milpas or grazing land, that are completely inaccessible by car. These trips can take hours, following trails that easily cover 500–1000 km of vertical movement over rugged terrain. However, the Least Cost Path (LCP) analyses used to model travel both in the present and the past frequently fail in mountainous landscapes because of built-in biases against high elevations. This presentation explores the spatial data collected during walking tours with local guides and what these results tell us about how people actually move through rugged, high-elevation mountain landscapes. Ultimately, the spatial and ethnographic data together will provide a more holistic picture of movement in mountain landscapes and help archaeologists understand more in-depth the history of occupation and movement in the Sierra Madre del Sur mountains.

Stoll, Marijke (Indiana University)

[210]

Chair

Stone, Abi [225] see Marks, Theodore

Stone, Jessica (University of Minnesota, Twin Cities), Reniel Rodriguez Ramos (Universidad de Puerto Rico), William Pestle (University of Miami) and Maria Nieves-Colón (University of Minnesota)

[127]

Genomic Contributions to Understanding Early Caribbean Settlement

In the Caribbean, archaeological and linguistic research have contributed a wealth of knowledge to our understanding of human settlement, yet many issues surrounding dispersal trajectories, adaptation to island environments, and population dynamics over time are still debated. In recent decades, genomic findings have begun to transform our understanding of regional population dynamics and address long-standing questions. Additionally, ancient DNA (aDNA) has quickly become a promising method for exploring human population origins and dispersals in island systems. Despite these advances, the application of paleogenomic techniques for studying ancient Caribbean peoples has primarily focused on individuals dating to the last ~2,500 years and from a small number of islands. Here, we discuss the potential contributions that paleogenomics can make toward elucidating the origins of the earliest Caribbean inhabitants and past interactions between contemporaneous and later island communities. Additionally, we will present preliminary results of an aDNA study of human Ancestors from the Ortiz site located in southwestern Puerto Rico, currently the oldest dated from the island. We will discuss how these data, when contextualized with existing archaeological and bioarchaeological evidence, shed light on the lifeways of Puerto Rico's earliest known inhabitants.

Stone, Pamela (University of Massachusetts, Amherst)

[7]

Chair

Stone, Pamela (University of Massachusetts, Amherst)

[7]

Community-Engaged Bioarchaeology: Decolonizing Research

Bioarchaeology as a field of inquiry aims to bring forward the life histories of individuals through the analysis of skeletal markers of disease, trauma, and activities, at the individual and population level to better understand the experiences and identities of people that came before. A recent and important shift in the bioarchaeological approach has been the inclusion and consideration of descendant groups. In this paper, I consider the slow pace of, and sometimes resistance to, intertwining Indigenous and descendant community knowledge within bioarchaeological research. My goal here is to underscore the need to rethink traditionally colonial research questions and modes of inquiry, and to revision bioarchaeological practices that are community engaged and intertwined with Indigenous/descendant knowledge of their ancestors. A community-engaged bioarchaeological project begins by bringing in Indigenous people and/or descendants from the very beginning of the project, centering their questions and bringing forward their knowledge of the past provides grounding and inclusion. Shifting away from solely the analytical goals of bioarchaeologists to those of the community creates a shared vision of the past that is co-created by invested descendants and bioarchaeologists. This process looks different and develops differently across projects but is an important step in decolonizing bioarchaeological practices.

Stone, Pamela [7] see Ralston, Clair

Stoner, Wesley (University of Missouri)

[163]

Evaluación del desarrollo de urbanismo en el Valle de Tepango entre los Periodos Formativo y Clásico

El urbanismo, en gran parte de las tierras bajas del Golfo, exhibe un patrón de crecimiento continuo desde el período Formativo hasta el Clásico. En muchas regiones, las ciudades más antiguas del Formativo se convirtieron en las ciudades más grandes e influyentes del Clásico con centros más pequeños alrededor. A menudo se supone que un patrón de centros pequeños rodeando a centros grandes representa una jerarquía política, en donde el centro grande controla sus alrededores. Las investigaciones realizadas en el Valle de Tepango han sugerido precisamente este patrón de crecimiento, siendo Totocapan el asentamiento más grande desde el Formativo Medio hasta el Clásico Tardío. En el pasado, he propuesto que Totocapan integró políticamente el Valle por un breve tiempo desde el Clásico Medio hasta el Clásico Tardío; sin embargo, esa conclusión se basó principalmente en una comparación entre las diferencias de tamaño que existen en la arquitectura monumental de los sitios. En esta presentación, reexamino la distribución de estilos cerámicos y los patrones económicos de producción e intercambio durante la transición del Formativo al Clásico en el Valle de Tepango para probar la naturaleza de la interacción entre los centros político-rituales de la región.

Stoner, Wesley [121] see Renson, Virginie

Stoner, Wesley [216] see Stark, Barbara

Stowe, Michael (Department of Defense)

[35]

One Step at a Time: Preliminary Evidence for Human and Megafauna Trackways Located along the Ancient Shorelines of Lake Lucero, White Sands Missile Range

In 2006, human trackways were discovered at White Sands National Park along with the trackways of giant Sloth, Dire Wolf, Camel, and Columbian Mammoth. Upon the mapping and excavation of these prints in 2018, small preserved ancient grass seeds (*Ruppia cirrhosa*) were revealed that provided calibrated dates of 22,860 (± 320) and 21,130 (± 250) years ago (Bennett 2021). Considering this unique discovery, and its proximity to portions of White Sands Missile Range (WSMR) the cultural resource team at WSMR has embarked on a unique project to conduct a large-scale (16 km²) aerial drone mapping project to identify additional human prints. This study will utilize numerous new digital technologies in coordination with targeted pedestrian survey to map large areas of the ancient shoreline of Lake Lucero. The expectation based on preliminary observations (several human trackway locations have already been identified) is that hundreds of human and megafauna trackways will be located. The implications for future research on these exciting new discoveries could provide interesting new perspectives on the peopling of the North American continent.

Stowe, Michael (Department of Defense)**[326]***Discussant*

Stowe, Michael [326] see Wurtz Penton, Michelle

St-Pierre, Éloïse (Université Laval) and Jacques Chabot (Université Laval)**[126]***Expedient Tools from a Functional Angle*

In almost every culture of the world, expedient tools are present. They are “tools of the moment.” These flakes were crafted quickly with semi-improvised techniques, then used for a short period of time and discarded. The use of flakes as tools may not only indicate reuse or recycling of debitage waste, but also the existence of a real intention to manufacture blanks for immediate use. Expedient tools are not the most “glamorous” artifacts found on archaeological sites; they haven’t been as studied in comparison to formal tools. This is true from both a technological and a functional standpoint. The main challenge in order to diagnose the function of ad hoc tools is to decode their discrete use-wear traces by high magnification traceology. This can be possible thanks to an experimental reference frame. As a case study, we will talk about Saint-Pierre-et-Miquelon’s prehistory. The French archipelago is located south of Newfoundland and was occupied by Paleoeskimo and Amerindian populations for 5,000 years. Recently, we performed traceological analyses on formal tools found on the island and in a forthcoming project we aim to study the use-wear patterns of expedient tools in order to compare subsistence activities.

Straus, Lawrence (University of New Mexico), Manuel Gonzalez-Morales (Universidad de Cantabria), Igor Gutierrez-Zugasti (Universidad de Cantabria), David Cuenca-Solana (Universidad de Cantabria) and Ana Marin-Arroyo (Grupo EvoAdapta)**[247]***Ancient DNA Analyses and the Human Population of Western Europe during and after the Last Glacial Maximum: Major Contributions from El Mirón Cave (Cantabria, Spain)*

Pioneering genomic analyses of bone and dental calculus from the 19,000-year-old Magdalenian “Red Lady” skeleton in El Mirón Cave, along with DNA from other Late Upper Paleolithic human remains provide critical information supporting the archaeologically based theory of human range southward contraction and northward re-expansion in response to the major environmental changes of the LGM. The existence of refugia during the Solutrean followed by recolonization during the Magdalenian, as proposed by Jochim and Straus, is confirmed genetically, with the addition of novel information on gene flow among the Balkans, Italy, Belgium, France, and Iberia, reinforcing the archaeological evidence of interregion relationships, especially during the Magdalenian. Details on the oral biome of the El Mirón adult female, including connections to long-extinct Neanderthals provide insights into the lives of Late Glacial humans in northern Spain that complement classic evidence from artifact, faunal, and human paleontological analyses. DNA analyses of salmon and red deer—key food resources for Solutrean and Magdalenian foragers—confirm the role of the Cantabrian region as a refugium during the LGM and Oldest Dryas. The paleogenetic revolution led by Pääbo has both confirmed archaeological models and provided extraordinary details on key aspects of Upper Paleolithic population history in Europe.

Straus, Lawrence [247] see Gelabert, Pere

Strauss, Stephanie (ACLS Fellow, 2023–2024)**[128]***Verdant Signs: The Making and Shaping of Foodstuffs in Mesoamerican Texts*

Verdant signs abound in the writing systems of ancient Mesoamerica. Hieroglyphic records of abundance, germination, and rebirth ground ritual speech in agricultural metaphors. A robust iconography of vegetal

growth reflects both the natural environment and human ingenuity through plant domestication and resource exploitation. This paper offers a cross-cultural exploration of vegetal expressions from the epigraphic record and provides a step forward in assembling a visual vocabulary of growth and consumption glyphs. From Epi-Olmec, to Maya, to Mixtec, this study of verdant signs stretches across Mesoamerican time and space to push our understanding of this topic beyond the iconic subjects of maize and cacao.

Stringer Clary, Katie [303] see Dillian, Carolyn

Strouse, Phoenix [12] see White, Chantel

Stuart, David (University of Texas, Austin)

[159]

The Northern Question: The Kaanu'l Kingdom and Its Legacy in Yucatán

The historical importance of the Kaanu'l (Kanul) dynasty and its political networks is now well established. Dzibanche and Calakmul were its two principal centers over the course of the Late Classic period, and the sources we use for reconstructing its history come from many surrounding sites in the southern lowlands. In this paper, I look northward, into the political landscape of northern Quintana Roo, Yucatán, and Campeche, in order to assess Kaanu'l's presence and influence in those regions. The sources at sites such as Coba, Okop, and Edzna are scarce by comparison, yet point to a close series of interactions, perhaps different in than what is evident with Kaanu'l's aggressive alliance-building the Petén and beyond. Looking beyond the Classic inscriptions, I propose a historical connection between the Kaanu'l dynasty of the Classic period and the Canul lineage of Postclassic Yucatán, members of the Mayapán confederacy who later established their own polity in northern Campeche not long before the Spanish invasion. Historical, geographic, and linguistic factors raise the possibility that Kaanu'l (Dzibanche) was a Yukatekan-speaking center, raising important implications for interpreting the broader ethnic and political landscape of the Maya lowlands in the Classic period.

Stubbing, Michael [202] see Chenault, Mark

Stull, Scott (SUNY Cortland)

[91]

Experimental Archaeology and the Theory of Experience: A View from Medieval Archaeology

The theoretical foundation of experimental archaeology is often left implicit. Some argue that the primary value of experimental archaeology lies in scientific experiments to investigate specific and non-theoretical questions about ancient technology. This paper will address the experiential aspect of experimental archaeology and how that can make a significant and valuable contribution to better interpretations of the archaeological past. The role of human action and behavior is central to anthropological studies, and interacting with the material world is a central part of human action. Experimental archaeology can make a step toward recreating past behavior and material interaction rather than just replicating technology. Examples from medieval archaeology in Europe, specifically food and ceramics, will be used to illustrate the value in experiential experimental archaeology.

Stumpf, Mara (Texas State University) and Sara Juengst (University of North Carolina, Charlotte)

[70]

The Enduring Practice of Dental Modification in the Ecuadorian Past

Dental modification has been well documented from the coast of Ecuador, with practices including elaborate

dental inlays and incisions. However, few examples come from recently excavated or well-provenienced sites, making the antiquity and changing significance of dental modification unclear. Additionally, it is unclear whether this practice originated in Ecuador or was imported from Mesoamerica through well-established trade routes. This poster presents evidence of dental modification from Buen Suceso, a coastal Ecuadorian site with two occupational histories. First, we present what may be the oldest examples of Ecuadorian dental modification from two Valdivia burials (3800–1450 BC). These two individuals, a female adult and a nonadult, both presented a single incised line on each of their central incisors. Notably, these individuals predate the existence of known trade routes with Mesoamerica. Second, we present evidence of Manteño (AD 700–1500) dental modification from two individuals and an associated stone bead artifact modified to look like a tooth. These modifications were more elaborate, with several horizontal and vertical incised lines. We argue that these examples of modification demonstrate the enduring and autochthonal practice of dental modification in Ecuador and the significant connection between dental modification and power over time.

Stumpf, Mara [70] see Ward, Emily

Sturdevant, Clark and Carol Colaninno (Emory University)

[184]

Understanding the Forecasted Labor Shortage: Undergraduate Views of Archaeological Careers

There is a projected dearth of qualified archaeological professionals in the coming decade. As such, it becomes essential to discover the underlying causes of a lack of interest in pursuing a career in archaeology among individuals otherwise interested in the field. Social cognitive career theory posits that self-efficacy, expected outcomes, and goal mechanisms lead to a student's career-relevant interest leading to their career aspiration. Could a deficiency in these factors caused by marginalization be affecting interest? Using a mixed-methods approach, we explore the career interests of undergraduate students taking introductory archaeology courses to understand perceptions of careers in archaeology with students, both majors and nonmajors, enrolled at a regional comprehensive institution in the Midwest. Participating students completed surveys at the beginning and end of these courses. Some students volunteered to be interviewed regarding their class experience, career interests, and perceptions of archaeology. Survey results reveal that there are no significant changes in career interest from the beginning to the end of an introductory course in archaeology. Interview data indicate that taking the course gave students a better appreciation for archaeology and none of those interviewed felt less likely to pursue a career in the discipline.

Stutz, Aaron [93] see Alonso Eguiluz, Monica

Styles, Bonnie (Illinois State Museum [Emerita]) and Sarah Neusius (Indiana University of Pennsylvania)

[204]

Interdisciplinary Research, Zooarchaeology, Electronic Databases, and the Impacts of Struever's Vision

Struever's passion for multidisciplinary archaeological research in the lower Illinois River valley (LIV) attracted both authors to Northwestern University and to our specializations in zooarchaeology. Struever's primary interest was in anthropological interpretations of subsistence, settlement, and social systems, and he encouraged us to go beyond the natural history orientations of our zoology colleagues in our zooarchaeological research. Research on LIV Archaic and Woodland subsistence considered the influences of climate and environmental change and also of cultural factors such as settlement function and cultural traditions. Standard use of screening and flotation yielded large collections of faunal remains, and to make sense of them, we developed some of the earliest coding formats for computer-assisted analyses of faunal data. The electronic databases we generated and the methods we used facilitated systematic comparative research. Regional zooarchaeological research demonstrated the early importance of aquatic animals and the increased importance of fish as gardening and larger settlements emerged. Struever's perspectives, our interdisciplinary experiences, commitment to analysis of small-scale remains, and development and use of

electronic databases have been foundational in our careers and in our recent synthetic zooarchaeological research documenting the great variability in human use of fauna across the midwestern and interior eastern United States.

Styles, Thomas [204] see Hajic, Edwin

Su, Xin (Harvard University)

[19]

Chair

Su, Xin (Harvard University)

[19]

How Were Stones Used in a Bronze Age Society? A Case in the Middle Yangtze River

Numerous previous archaeological discoveries and studies have shown that rulers from the Central Plains during the Shang Dynasty (ca. 1600–1050 BC) were motivated to systematically construct settlements and operate in the Jiangnan Area of the Middle Yangtze River drainage at least in part in order to control metal resources in the middle and lower reaches of the Yangtze River. Some recent studies are also revealing this; for example, some scholars found that the Middle Yangtze River Valley is tentatively identified to be the provenance of the copper used at the Early Shang Capital in Zhengzhou by studying lead isotopes in crucibles and a metal droplet unearthed in Zhengzhou. But, to what extent these same rulers affected the exploitation of other resources is an open question. I will investigate whether we can see evidence of top-down centralized control of ubiquitous resources necessary for everyday life in the region by focusing on the acquisition and use of stone raw materials used in this region.

Suarez, Jon Simon [175] see Seymour, Brian

Suarez, Nicholas (University of Pittsburgh), Claire Ebert (University of Pittsburgh), John Walden (Harvard University), Julie Hoggarth (Baylor University) and Jaime Awe (Northern Arizona University)

[266]

Interwoven Networks: Obsidian Exchange and Overlapping Economies among the Ancient Maya of Western Belize

Studies of ancient Maya commodities have focused on elite control of economic institutions, yet goods were mobilized at different levels of the social hierarchy to support the growth of broader economic institutions. Here we present the results of portable X-ray fluorescence (pXRF) analyses of over 4,000 obsidian artifacts from Preclassic to Terminal Classic period (ca. 900 BC–AD 900/1000) contexts from four sites across the Belize River Valley region of the Maya lowlands (Baking Pot, Cahal Pech, Lower Dover, Xunantunich) to reconstruct economic networks within and between communities. Geochemical sourcing data are integrated into formal network analyses to explore to what degree ancient Maya obsidian economies were centralized, the extent to which they overlapped, and how these trends transformed through time. Commoner households possessed more homogeneous assemblages with fewer sources, likely obtained through decentralized exchange relationships. In contrast, more diverse assemblages with more sources of obsidian from higher status contexts reflect the development of more formal economic institutions during the Classic period. This study has broad implications for understanding differences in distribution and consumption of commodities between apical elite, intermediate elite, and commoners, and the transformations of their relationships in the Maya world over the *longue durée*.

Suarez, Nicholas [283] see Messinger, Emma

Suárez, Rafael (Universidad de la República, Uruguay)**[306]***Temporal Persistence of Spear-Thrower Use in Uruguay: Evidence from the Late Pleistocene and Late Holocene*

The plains of Uruguay are an appropriate place to investigate different aspects of lithic projectile technology used with spear-thrower and bow and arrow. During the initial settlement, we have recorded an interesting cultural diversity with at least four different designs of projectile points: Fishtail, Tigre, Pay Paso, and triangular non-stemmed, which must have been used with a spear-thrower. The chronological evidence suggests the beginning of this weapon system around the late Pleistocene (ca. 12,900 cal BP) and their extended during the early Holocene (ca. 10,300 cal BP). There is also direct evidence of spear-thrower use in Uruguay during the late Holocene (ca. 1800–1000 cal BP); some atlatl bone/antler hooks or spurs have been recovered in archaeological contexts, which are presented and discussed here. In addition, there are data that indicate the use of manufactured projectiles to be used with bow and arrow. It is not yet clear how the latest weapons system enters the region. This presentation discusses the broad temporal persistence, possible cultural transmission, and invention-reinvention of spear-throwers in Uruguay.

Suárez Calderón, Amanda (Dumbarton Oaks)**[188]***The Emergence of Social Complexity in the Precolumbian Socio-ceremonial Center of Java in Southern Costa Rica*

The settlement of Java is a precolumbian socio-ceremonial center located on a hilltop in the Coto Brus Valley, in southern Costa Rica. An intensive survey of the site revealed that the main occupation of the site occurred several centuries earlier than previously thought. Java is one of the largest settlements from the Aguas Buenas period, with an area of approximately 40 ha and a population between 400 and 800 people. In spite of the copious amounts of stone sculptures, petroglyphs, and possibly residential earthen mounds, the ceramic and lithic remains have the characteristics of a domestic assemblage and they show very little variation across the different sectors of the site. In other words, there are no indications of inequalities based on wealth accumulation or access to fine ceramics or specialized tools, which are often interpreted as status markers. Finally, the concentration of the population on the hilltop, the privileged view of the valley, and the clearly delimited layout of the settlement indicate a potential concern about the threat of violence. These results question long-held assumptions in the regional archaeology about the relationship between hierarchy and monumentality.

Suarez Gonzalez, Nathalie (Université Libre de Bruxelles), Lawrence Owens (University of Winchester), Gontran Sonet (Institut Royal des Sciences Naturelles de Belgique) and Peter Eeckhout (Université Libre de Bruxelles)**[53]***Characterization of a Multiple Burial Context from Pachacamac, Peru: Complementarity between Bioarchaeology and Molecular Archaeology*

Pachacamac is a major precolumbian site located on Peru's Central Coast. Covering approximately 6 km², the site was occupied for over a thousand years before the Spanish conquest in the early sixteenth century. In 2012, the Ychsma Project discovered a unique Late Intermediate period (AD 900–1470) multiple burial ("Cx4") made of two funerary chambers with a vegetal roof structure, containing over 110 intact and fragmentary deceased together with numerous grave goods. More than 60% of the individuals are subadults whose sex cannot be assigned using osteological observation. Among the adults, 23 females and 20 males were identified, and the sex of the remaining four individuals couldn't be assigned with certainty. We aim to fully understand the sociobiology of the Cx4 population, including biological sex, using a combined bioarchaeology and molecular archaeology approach. Despite significant human modern contamination and low amounts of endogenous ancient DNA, our results show that sex could be assigned genetically in >70% of the cases, including subadults. Sex identification of infants, children and adolescents is crucial to fully understand this complex context and its funerary recruitment, and to perform an integrated and holistic analysis of all associated data.

Sudron, Emma [246] see Halcrow, Sian

Sugiyama, Nawa (University of California, Riverside), Yen-Shin Hsu (Smithsonian Institution) and Edsel Robles Martínez (Proyecto Complejo Plaza de las Columnas)
[12]

A Zooarchaeological Reconstruction of the Grand Feast of Plaza of the Columns, Teotihuacan

Offering D1 represents the residue of an extravagant feast, involving a plethora of artifacts, over 25,000 ceramic fragments, and more than 50,000 animal bones ceremoniously “killed” and discarded in a pit excavated in an old plaza floor. We present the zooarchaeological report of this assemblage, focusing on trying to understand the scale of public feasting at Teotihuacan. The volume and properties of the ceramics tells us this event was a state-sponsored feast that included many foreign diplomats, likely special guests, to commemorate the completion of the construction of Structure 25C, one of the three major pyramids at Plaza of the Columns. As most of the trash from this grand feast seems to be sealed in this offering cache, it provides an opportune context to reconstruct ancient cuisine and the role of feasting in alliance building, power negotiations, and social identity construction.

Sugiyama, Nawa [12] see Cagnato, Clarissa

Sugiyama, Nawa [222] see Martínez-Polanco, María

Sugiyama, Nawa [239] see Sugiyama, Saburo

Sugiyama, Nawa [248] see Taxis Muñoz, Ariel

Sugiyama, Saburo (Arizona State University)
[239]

Chair

Sugiyama, Saburo (Arizona State University), Nawa Sugiyama (University of California, Riverside), Kazuhiro Sekiguchi (National Astronomical Observatory of Japan / NINS), Kuninori Iwashiro (scienceNODE) and Yuta Chiba (Okayama University)
[239]

Materialization of Time, Space, Nature, and Societies Denoted by New Lidar Maps at Teotihuacan

Primary archaeological data indicate that the current reconstruction of the city of Teotihuacan was apparently built with a master plan around AD 200. Three major monuments were harmoniously integrated into a rigorously calculated city layout with functional and/or symbolic units including the Avenue of the Dead, plazas, administrative facilities, or residential compounds. We have mapped, excavated, and consolidated buildings since the 1990s, recording architectural features, sculptures, or murals with total stations, drone-mounted lidar, Slam-lidar, 3D scanners, and photogrammetric devices. To explore architectural principles, artistic aesthetics, and integrated ideological factors like worldview or concepts of time and space, we analyze populous urban zones, surrounding cultivation lands, and mountaintop areas of Cerro Gordo and Patlachique, where Teotihuacanos left their concerns to landscape and astronomy. Taking advantage of ArcAstroVR, a new astroarchaeology program built on Stellarium, we reconstruct ancient skylscapes with masonry buildings precisely defined by our maps and analyze the city’s standardized orientations, dimensions, and spatial distributions, often reflecting astronomical phenomena of particular periods and time. We particularly test previous interpretations of the city’s N-S and E-W axes and argue in archaeological contexts the sociopolitical implications of advanced astronomical knowledge and the invention of Mesoamerican calendar systems blueprinted at Teotihuacan.

Sugiyama, Saburo [239] see Matsumoto, Naoko

Sugiyama, Saburo [239] see Robles García, Nelly

Sugiyama, Saburo [248] see Taxis Muñoz, Ariel

Sullivan, Alan, III [41] see Mink, Philip

Sullivan, Bryn [108] see Misra, Shikha

Sullivan, Kelsey (University of California, Riverside) and Kenichiro Tsukamoto (University of California, Riverside)

[164]

Results of the Multiyear Study of the Ancient Maya Lithic Production Community of the Took' Witz Group at El Palmar, Campeche, Mexico

This paper presents the results of a multiyear research project at the lithic production community of Took' Witz, a hinterland group located near the ancient Maya city of El Palmar (Campeche, Mexico). Our research explored the large-scale utilitarian lithic production that occurred at the site, as well as the activities and material cultures at three individual households—the West, East, and South Plazuelas. We use these datasets to examine the impact that different degrees of involvement in lithic production activities had on the socioeconomic status of each household. The presentation will detail the 2023 excavations within and around the three plazuelas in conjunction with the data from previous surveys, shovel testing, and excavations at the group. We will report the construction sequences and the activities that took place in each household. Finally, the results of all these archaeological investigations at Took' Witz allow us to demonstrate differences in the production activities and spatial proximities to production areas corresponding to distinct economic statuses of each household.

Sullivan, Lauren (University of Massachusetts), Eleanor King (Howard University) and Whitney Goodwin (Archaeology Laboratory at MURR)

[213]

Late Classic Marketplace Pottery Exchange in the Three Rivers Region

The understanding of Maya marketplaces has long been hindered by the lack of archaeological data to support their identification. The ceramic data presented here serves as one aspect of an overarching project that uses a configurational approach and a set of cross-cultural marketplace indicators to investigate the presence of an integrated regional market system in Three Rivers Region (TRR) during the Late Classic. The regional focus of this project provides for a more global view of artifact exchange. An important aspect of this research is to examine the comparability of goods among regional sites and households to identify supply chains. Neutron activation analysis (NAA) of selected sherds can provide an independent way of determining the potential existence of a market as well as a means of cross-verifying the data obtained from other types of analyses. In this paper, we discuss our hypotheses and preliminary analyses regarding the exchange of utilitarian as well as high-quality ceramic types between various sites in the TRR.

Sullivan, Lauren [251] see Ebert, Claire

Sullivan, Lauren [251] see Robertson, Robin

Sullivan, Lynne (University of Tennessee)

[253]

Discussant

Sullivan, Myles (University of Florida)

[140]

Cooking and Colonialism: Identifying Cultural Values and Identities in Consuming “Foreign” Goods in the British Atlantic World

Consumption, as a shared material practice, has frequently been examined by archaeologists to understand

the cultural dynamics in the distinction of groups that inform status, class, and identities. In the increasing integration of global exchanges across the Atlantic in the eighteenth century, this paper seeks to understand how nonlocal colonial goods were perceived, valued, and consumed in British colonies. This interest arises out of ongoing research that compares cultures of colonialism in the histories of two Atlantic ports: Spanish St. Augustine, FL, and British Charleston, SC. Given the contested and overlapping histories between these two cities in the North American Southeast, this preliminary research is interested in identifying how British colonists may have consumed Spanish goods in the eighteenth century, with implications for how the process of colonialism changed British colonists themselves. A survey of contemporary cookbooks, style guides, and personal correspondences can identify discourses on how Spanish goods (such as wine and chocolate) were considered and consumed in Britain and in Charleston, SC. The implications found in the consumption values of foreign goods are considered in comparison to the archaeological studies of the eighteenth-century British colonies that often emphasize a close adherence to their metropolitan influences.

Sullivan, Timothy (Corn Island Archaeology)

[320]

Chair

Sullivan, Timothy (Corn Island Archaeology), Ronald Bishop (Smithsonian Institution) and Elizabeth Paris (University of Calgary)

[320]

Late Classic / Early Postclassic Chiapanec, Zoque, and Maya Socioeconomic Interaction in and around the Chiapas Central Depression: Further Interpretations of the Results of an Instrumental Neutron Activation Analysis of Clay Sources and Paste Recipes in Fine Orange Ceramics

The Late Classic through Postclassic transition in Central Chiapas, ca. AD 750–900, was a time of dynamic change in population, social, and political organization, some of which was incurred by the entry of the Chiapanec people into the Central Depression. The Spanish conquistadors, arriving in the area some six centuries later, described the Chiapanec as dominating their Zoque neighbors and in frequent conflict with Maya groups in the neighboring highlands. This paper investigates the socioeconomic organization of people in the Central Depression and their relationship to neighboring groups at the Late Classic–Postclassic transition, through an instrumental neutron activation analysis (INAA) of fine orange pottery samples. We interpret variation in paste recipes as the result of craft production using a variety of local clay sources, and occasional exchange of vessels from the Jovel Valley. The results of this analysis suggest some interesting features in the socioeconomic organization of the region during this period.

Summerhayes, Glenn [217] see Fairbairn, Andrew

Sun, Yufeng (Washington University, St. Louis), Melissa Ritchey (Washington University, St. Louis) and Xinyi Liu (Washington University, St. Louis)

[179]

Grain Size Variation and Culinary Traditions: Insights into Prehistoric Food Globalization in Eurasia

Over the past 15 years, research into prehistoric food globalization has shed light on the timelines, routes, and tempos of crop diffusion across the Old World. This diffusion not only involved the spread of plants but also the reproduction and transformation of cultures, technologies, and ideologies associated with staple crops in diverse ecological and socioeconomic settings. Recent studies have delved deeper into this complex process, exploring culinary traditions, agricultural strategies, and labor organizations, among other factors. In our study, we examined published morphometric data on foxtail and broomcorn millets, wheat, and barley from the late fourth to the first millennium BC. Our findings reveal a consistent cross-taxonomic trend in grain-size changes along a longitudinal axis. Grains tend to compact when moving eastward and enlarge when moving westward across Eurasia. We argue that this phenomenon reflects profound differences in culinary traditions between Eastern and Western regions, rooted in Upper Paleolithic practices. Western Eurasian

culinary traditions historically favored larger grains for grinding and baking, whereas Eastern Eurasian culinary practices preferred smaller grains suited for steaming and boiling. This culinary preference likely played a crucial role in shaping the observed grain size variations across Eurasia in our study.

Sun, Zhuo

[19]

Settlement Construction and Craft Production: Recent Discoveries at the Panlongcheng Site

The Panlongcheng site was the largest urban settlement in the middle Yangtze River during the Xia and early Shang period (1500–1300 BC). In recent years, the joint archaeological expedition has carried out archaeological excavation at the Yangjianwan North and Wangjiazui locus of the Panlongcheng site. The new discoveries in the two loci reveal the shift of the core of the Panlongcheng settlement from south to north and different settlement patterns. Meanwhile, through typology, petrography, and X-ray fluorescence analysis, we explore the craft production in Panlongcheng, especially relating to its cultural characteristics, to identify the choices of technique and resources for pottery we excavated. The new discoveries of Panlongcheng site provide clues for recognizing the structure and changes of the urban settlement in early Bronze Age, researching pottery production and its associated cultural interaction.

Sunell, Scott (MCB Camp Pendleton)

[304]

Jeanne's Legacy and Indigenous Archaeology at Tlaqayamú (CA-SCRI-330)

Jeanne's excavations at tlaqayamú (CA-SCRI-330) yielded detailed information about bead-making on limuw (Santa Cruz Island, CA) in the centuries before Spanish colonization. Two of the important classes of artifacts that underpinned the conclusions she presented about life at tlaqayamú include shell-bead production detritus and sea grass cordage. Today, a multi-tribal Chumash group draws on her work analyzing these materials to revitalize indigenous knowledge there, exploring craft production and the occupational history of the site. Excavation in the fall of 2022 recovered sea grass cordage and shell artifacts from a cliff-side test unit. Analysis and interpretation is ongoing at Cal State Channel Islands. This talk describes the process of incorporating Jeanne's methods and conclusions to address community-based questions, of designing the excavation methods to recover material from a delicate location at the site while preserving its integrity, and of the rich possibility for future indigenous archaeology across limuw enabled by Jeanne's meticulous approach and uncompromising standards for analysis.

Sunseri, Jun (UC Berkeley)

[15]

Papa's Work Is Not Fathering

Stereotypes and concomitant expectations for priority setting in archaeological careerism exist in tension with deep anthropological drives to understand and embody family ideals. Archaeologists, long confronted with the idea that “engendering archaeology” (cf. Conkey and Gero 1991) meant we must grapple with the ways we pigeonhole actors in the past as well as agents of present theory and practice, have made tremendous strides with the former but little progress with the latter. Rather, unspoken gender ideologies persist and are policed in our discipline, constraining potential expansions of how we define and value nurturing roles filled by its practitioners, and continue to afflict role-modeling for the next generation of archaeologists. Personal reflections of a father seeking to chart a career in archaeology and not lose sight of what's most important include critical interventions by colleagues, friends, family, and community partners via coalition building and support networks at home, work, and in the field. Possibilities and potential for “Papa's work” are grounded not only in where one is from but also anchored in family and community futurities.

Sunshine, Daniel [89] see Lans, Aja

Surette, Flannery [257] see Werner, Joseph

Surface-Evans, Sarah (Michigan SHPO)

[65]

Moderator

[238]

Discussant

Surovell, Todd [219] see Mackie, Madeline

Sutter, Richard (Purdue University, Fort Wayne), Gabriel Prieto (University of Florida), John Verano (Tulane University), Rachel Witt (Tulane University) and Julio Asencio (Programa Arqueológico Huanchaco)

[212]

Chimú-Era (AD 1000–1450) Child Sacrifices from Pampa la Cruz-Montículo 1, Episode 3, and Pampa la Cruz-Montículo 2: Biodistance Comparisons with Other Chimú Sacrifices and Regional Skeletal Populations

In recent years, hundreds of Chimú-Era child sacrifices have been discovered at locations to the north of the Chimú's capital—Chan Chan—by the Programa Arqueológico Huanchaco. Here we report on biodistance results for 22 recently excavated child sacrifices from Pampa la Cruz-Montículo 1, Episode 3 (~AD 1220–1300), and 39 individuals from Pampa la Cruz-Montículo 2 (est ~AD 1000). Population structure and biodistance analyses indicate that the children from these contexts, like those previously reported from Pampa la Cruz-Montículo 1 Episodes 1, 4, and 5, are highly variable and unrelated to a local Chimú-era sample and seven additional comparative samples from the region. However, temporal trends in the data suggest that the children represented by these samples became increasingly variable through time. We discuss the implications of these results as they relate to the Chimú Empire's expansion and their ritual expressions of power and dominance over conquered peoples.

Sutton, Wendy (USDA Forest Service)

[144]

Discussant

Suzuki, Shintaro and Fernando Gutiérrez

[125]

Life and Death of a Middle Preclassic Individual from Aguada Fénix, Tabasco

We explore a Middle Preclassic skeleton from the site of Aguada Fénix, Tabasco. It is one of the scarce cases of the early temporality in the Maya area. We first describe in detail its archaeological context and osteological sex and age-at-death and infer the individual's social role. We evaluate his oral and skeletal pathologies and compare them with two later Classic burials found at a nearby site, El Tiradero. We found his megalithic use based on these assessments. Finally, we examine the post-sepulchral alteration according to the distribution of the skeletal elements in the burial context.

Swanson, Steve (Arizona State University) and Kari Schmidt (Terracon)

[174]

Cultural Landscapes of the SunZia Transmission Line Project

The SunZia transmission line traverses 550 miles in southeast Arizona and southwest New Mexico, crossing through the Hohokam and Mogollon archaeological culture areas. Recently completed survey of more than 50,000 acres provides unique information on landscape-scale interactions and facilitates interregional

comparisons of artifact, feature, and site densities in and between the Hohokam, Sobaipuri, San Simon Mogollon, Mimbres, and Piro cultures, complementing traditional emphasis on excavation of dense, core-area settlements.

Swantek, Laura (Phoenix College)

[162]

Social Connections Near and Far: The Role of Local and Exotic Goods in the Emergence of Complexity on Cyprus during the Prehistoric Bronze Age

The presence of international goods has long been a signifier of social complexity on Cyprus, but the accumulation of local goods and interregional imports may be equally as important for understanding the formation of hierarchical social networks during the Prehistoric Bronze Age (2400–1700 cal BC). This period marks the transition from undifferentiated social systems to urban, hierarchical systems with higher levels of wealth inequality. Studies have shown that though Cyprus is small, regional differences appear in the material culture, and trade is apparent between communities on the North Coast, Central Plain and South Coast. This paper explores the role of local goods as a proxy for differential control of resources within a community, and interregional imports as a proxy for participation in intra-island trade networks in the emergence of social complexity on Cyprus during this period. These proxy data obtained from mortuary contexts are statistically analyzed to determine the scale of access to local resources and participation in trade networks, and the results are used to determine the network models that best describe the social system. In approximating social network configurations, the role of local and imported goods in the emergence of complexity is determined.

Swarts, Kelly (Umea Plant Science Center)

[149]

Ancient Genomics Is Archaeobiology

Archaeo- or paleoethnobiology is the study of how humans interact with their environment; the most extreme and intimate expression of this relationship is domestication. Domesticates are not only a biological organism, with their own unique evolutionary trajectories that they bring into domestication, but they are also a cultural artifact, their genomes shaped by millennia of human values and practices. Genomic analysis, incorporating ancient samples, allows us to infer past networks of trade and exchange, human movements and the cultural values and practices of the people who shaped modern agriculture.

Swenson, Edward (University of Toronto)

[76]

Discussant

Swenson, Edward (University of Toronto)

[248]

The Aesthetics and Poetics of Infrastructures in Ancient Andean Urbanism

Social scientists have stressed the invisibility of modern infrastructures, whether roads, irrigation systems, or hidden electrical wires and plumbing. They have argued in turn that as a system of interconnected substrates, infrastructures recede to the background and become the subject of conscious reckoning primarily when they fail or breakdown. However, infrastructures in both pre-industrial and contemporary societies often form critical nodes of larger religious landscapes, and they become key sites of urban spectacle. Inspired by the theories of Rancière, Larkin, Lefebvre, and others, this paper examines the seamless interconnection of architecture, religious aesthetics, and infrastructures in Ancient Andean cities and elsewhere. It also critiques the archaeological tendency to ignore the performative aspect of construction projects—often highly visible, politically charged, and protracted affairs. In the end, infrastructures played a central role in the constitution of ancient urban subjects not simply by prescribing movement or controlling access to resources but by wedding the aesthetics of place with religious cosmology, imagination, community self-esteem, and sentiments of empowerment.

Symonds, Stacey [309] see Arieta Baizabal, Virginia

Symons, Alexander (Cornell University)

[169]

Kura-Araxes Herding Practices in Early Bronze Age Armenia

In this paper, I present an analysis of Early Bronze Age (EBA) faunal remains from field investigations conducted between 1998 and 2018 in the Tsaghkahovit plain of northern Armenia by the joint Armenian-American Project for the Archaeology and Geography of Ancient Transcaucasian Societies (Project ArAGATS). The vast majority of Project ArAGATS's EBA fauna was recovered from the well-documented site of Gegharot. Excavations at Gegharot revealed an agropastoral village, with other lines of evidence indicating a minimally differentiated social structure. This paper examines Kura-Araxes egalitarianism from the perspective of Gegharot's faunal data. Identification of differential status may be possible through context specific analyses, e.g., comparing between houses or areas of the site and identifying consumption of limited parts of the animal vs. consumption of whole animals, or by consumption of hunted animals vs. reared animals. The site includes well-defined Early Bronze stratigraphic layers, distinguished by distinct Kura-Araxes ceramic complexes, allowing for the investigation of change over time in herd composition and management. I specifically examine the data for distinct herding practices between and within taxa in order to assess whether distinct herds of animals can be identified in the faunal record.

Szpak, Paul [249] see Derian, Alexandra

Szpak, Paul [268] see Driscoll, Brooke

Szremski, Kasia (University of Illinois)

[324]

Negotiating with Empire: The Chancay as "Intermediaries" in the Inka-Chimú Conflict

During the Late Intermediate period, the north-central coast of Peru was inhabited by a number of small but dynamic polities, or *señoríos*, that were actively engaged in interregional networks of trade, intermarriage, and warfare. However, even though the north-central coast was sandwiched between the Chimú and Inka, we know relatively little about how the *señoríos* who inhabited this region interacted with or were incorporated into these late prehispanic empires. This paper argues that, rather than be passively absorbed into the Chimú or Inka's rapidly expanding spheres, at least some of these groups actively negotiated their own terms of engagement with these growing imperial powers. Specifically, the author examines how one of these *señoríos*, the Chancay, may have leveraged their position as merchants to at least partially resist both Chimú and later Inka advances. Using recent excavation data from the Chancay site of Cerro Blanco in the Huanangue Valley, Peru, as well as ethnohistoric data from the Justicia 396, and the *Historia Anonima de Trujillo*, this paper examines the ways in which this small, but potentially ambitious community of merchants may have been drawn into the wider Chimú-Inka conflict and yet emerged unscathed through advantageous alliances on both sides.

Szymanski, Ryan (Petrichor Research)

[190]

Chair

Szymanski, Ryan (Petrichor Research) and Sewasew Assefa (Washington University, St. Louis)

[190]

Macrobotanical and Microbotanical Evidence for Plant Use and Consumption at Gede, Kenya

Over the last several decades, excavations at numerous Swahili period sites along the East African coast have yielded a wide variety of data on economic and cultural practices during the last millennium BP. The results of intensive flotation recovery of macrobotanical remains from pit latrine sediments at housing structures are

presented, providing direct evidence of the consumption of a variety of plant types by elite populations at Gede during the fifteenth–eighteenth centuries CE. We further provide data from pollen/phytolith washes of ceramic remains associated with elite burials at Gede, which suggest not only the presence of goods interred with the dead during this period but also offer insight into the symbolic importance of specific food types in funerary practices at this location.

Szymanski, Ryan [201] see Haileselassie Assefa, Sewasew

Tabb, Latiayna [6] see Smit, Douglas

Tabibou, Tabibou Ali [217] see Crowther, Alison

Taché, Karine [202] see Lamothe, Francis

Tacon, Paul [156] see Brady, Liam

Taft, Spencer [87] see Efford, Meaghan

Taieb, Juliette (Univ. Paris I Panthéon-Sorbonne), Camille Mayeux (ArScAn – Archéologie[s] Environnementale[s]), Claire Alix (Univ. Paris I Pantheon Sorbonne) and Owen Mason (Institute of Arctic Alpine Research [INSTAAR]) [307]

Using Paleoenvironmental Data to Learn about Past Inuit Societies: A Case Study from the Rising Whale (KTZ304) Site at Cape Espenberg, Northwest Alaska

To precisely contextualize and date climate variations and practices related to living spaces at the onset of the Little Ice Age, archaeoenvironmental analyses were conducted within a winter dwelling (Feature 21) at the Rising Whale site, Cape Espenberg. Two high-resolution datasets were employed: tree rings and insect and plant macrofossils, both benefiting from exceptional permafrost preservation. In this tundra landscape where driftwood from interior Alaska is the main wood resource, a 1,000-year-long tree-ring 1940s legacy chronology for northwest Alaska remains the yardstick for dendrochronology and paleoclimatic inferences. Tree-ring dating of 19 white spruce architectural elements in combination with high-resolution radiocarbon wiggle-matching yielded seven precise calendrical dates, refining and confirming that the construction and occupation of F-21 fell after AD 1265. Identified seed (archaeobotany) and insect (entomology) remains from within the house established local resource use(s) and space management within this refined chronology. The accumulation of necrophagous and detritivorous insect remains indicates storage spaces or dumps areas for organic matter of animal and plant origin consumed by the inhabitants, while the presence of characteristic tundra insects and plant seeds indicates local resources collected in summer and eaten or used in the construction and maintenance of the dwelling.

Taira, Johnny (Universidad Nacional Federico Villarreal) [53]

Interacción socioeconómica costa-sierra en el Valle Medio del Río Mala durante Periodos Tardíos

La presente investigación es el resultado de una prospección en el valle medio del río Mala en Perú, desde el anexo de Checas hasta el anexo de Minay; durante la cual se identificó un total de 10 sitios arqueológicos, muchos de los cuales no presentaban un registro en la literatura arqueológica. En el presente trabajo se discute la interacción socioeconómica costa-sierra, evidenciada en esta área, la cual está reflejada en la

arquitectura y los estilos cerámicos identificados, cuya asociación corresponde a sociedades tanto serranas como costeñas que estarían coexistiendo económica y socialmente (dualismo sociopolítico). De igual manera se plantea una expansión de la sociedad Ychsma hacia la zona media del valle de Mala, por lo que su alcance cultural no solo estaría limitado al valle de Lurín como se tiene establecido en investigaciones relacionada a esta etnia.

Taivalkoski, Ariel (Cultural Resource Analysts Inc.)

[191]

Puffin Heads and Albatross Limbs: An Examination of Avifaunal Usage from the Rat Islands, Alaska

Human groups have used birds in a variety of ways, from food, to raw material for tools, to clothing. In addition to their more practical usages, birds often play a significant role in cosmologies and myths. However, due to poor preservation and excavation bias bird remains have only recently begun to be studied in depth. The archaeological sites of the Aleutian Islands have very large avian bone assemblages due to excellent taphonomic conditions which allows rigorous study from which we can study not only local relationships with birds but also develop models for other times and places. Comparing the patterns of archaeological skeletal part representation with oral histories and ethnographies reveals the interplay of the symbolic and 'material' aspects of the relationship between birds and the residents of the Aleutian Islands. This presentation will examine a case study from KIS-050 and RAT-31 to examine how skeletal part representation can vary greatly even within island groupings and can reveal cultural and environmental changes. Specifically, the presence of puffin heads at KIS-050 versus the abundance of albatross head/parts at RAT-31 illustrates how avian use varied between the islands due to cultural factors and site usage.

Takada, Yuma [239] see Robles García, Nelly

Takatsuchi, Ryohei [248] see Hernández Sariñana, Daniela

Talbot, Thomas [41] see Michalski, Matthew

Tallavaara, Miikka (University of Helsinki, Finland), Joseph Burger (University of Kentucky), Trevor Fristoe (University of Puerto Rico, Rio Piedras) and Miska Luoto (University of Helsinki, Finland)

[219]

Biogeography of Hunter-Gatherer Diet

Anthropologists have long recognized latitudinal pattern in hunter-gatherer diet, where plant use increases toward tropics. However, causes of the dietary variability remain unclear reflecting the fact that ecology in general lacks robust theory for predicting geographical variation in the balance of plant and animal foods that omnivores consume. Here, we use large ethnographic data to gain insight into the causes of global-scale variation in hunter-gatherer diet composition by analyzing its relationship with environmental variables that reflect the availability of resources and with metrics of population pressure. Our results show that climate and other environmental factors are clearly more important than demographic factors in explaining large-scale diet variability. We also compare the patterns observed in hunter-gatherers to patterns of diet composition among other mammals. Our results show that a latitudinal gradient of increasing plant use toward lower latitudes is a general phenomenon among omnivorous mammals. Furthermore, we find that geographic variation in hunter-gatherer diet mirrors patterns in the functional composition of mammal communities globally. Together, our findings indicate that the environmental factors shaping the feeding ecology and distribution of mammals generally have been a dominant force in driving resource use in hunter-gatherers.

Talley, Dania (Oakland Museum of California)**[15]***“Too Hood for This”: Navigating the Profession of Archaeology and Finding My Place*

I found my roots in archaeology in undergraduate school during an archaeological excavation at the Stewart Indian School in Carson City, NV. It was an empowering experience. It was the first time I witnessed a BIPOC community having autonomy over their historical narratives. It also brewed a sense of rootlessness in me as an African American from the hood. Indigenous history, knowledge, and lifeways can be unearthed anywhere in the United States, but this is not the case for African Americans. The archaeological experience I had in Nevada encouraged me to pursue archaeology if it meant that I, the African American, could have a voice in the historical narratives of Black people. This collaborative experience was enticing, but it isn't always the reality of archaeology and I found myself being “too hood” for the profession. But my personal experiences and professional experiences have influenced how I approach my work offering nuanced ways of thinking and taking archaeological practices back to the streets and into BIPOC communities.

Tamez-Galvan, Evan [13] see Ochatoma Cabrera, Jose

Tamura, Kohei (Tohoku University)**[308]***Macroscopic Comparative Studies of Archaeological Data: Spatiotemporal Variability in Lithic Technology of Paleolithic Asia*

Comparative studies using archaeological data on a broad spatiotemporal scale can provide an overview for investigating significant questions in human history and can promote discussions among scholars from different disciplines. This talk will present the results of a quantitative analysis of lithic technologies from the PaleoAsia Database, developed as a part of the “Cultural History of PaleoAsia” project. The database comprises information about the presence or absence of 24 distinct lithic technologies across 895 lithic assemblages spanning from 130 to 20 ka, along with spatial, temporal, and other archaeological information. Our analysis identified and visualized spatiotemporal variations in lithic technologies, potentially linked to the dispersal of modern humans. For instance, the frequencies of blade/bladelet production and microlithic tools concurrently increased primarily in the north of the Himalaya Mountains, even though the occurrence of these technologies exhibited a mosaic pattern in northern China. However, large-scale comparative studies have various limitations, including issues in developing a unified coding scheme and sampling biases. We will further present our attempts to address these issues, including geometric morphometrics and simulations using data from the Japanese archipelago.

Tang, Yiyi (Dartmouth College), Jiajing Wang (Dartmouth College), Liu Li (Stanford University) and Wei Chen (Hubei University)**[51]***Local Adaptation and Subsistence Strategy of Yangshao Migrants in Northwestern Sichuan in China during the Middle Neolithic (5300–4700 cal BP)*

Migration is a frequent phenomenon in human history. Previous studies mainly used migration as a general term to explain any cultural changes observed in migrant communities. Recent studies, however, have recognized that migration is embedded in both environmental and social contexts, thus making it necessary to study the consequence of migration on a case-by-case basis. To better understand the changes associated with migrational processes, this case study investigates the subsistence pattern of a Neolithic site, Liujiazhai, in Northwestern Highland Sichuan by employing microbotanical residue analysis on pottery vessels. Our results contain millet phytoliths and thus contribute to the overall picture of millet agriculture in Yangshao and Majiayao migrant communities and enrich our understanding of how varying crop patterns in Neolithic western China are likely a consequence of migration. In addition, we suggest that Liujiazhai migrants adapted to the high-altitude environment by adopting more local wild plant resources. This study shows that, although Yangshao migrants were still connected to their homeland in terms of material culture, relocating to the challenging environment in

NW Sichuan required adaptive strategies that distinguished the Yangshao migrants, including those at Liujiazhai, from their home culture. Hence, this study exemplifies how migration is an agent of change.

Tantaleán, Henry (Universidad Nacional Mayor de San Marcos), Carito Tavera-Medina (Universitat de Barcelona), Mauricio Gastello (Universidad Nacional Mayor de San Marcos), Ines Uribe (Universidad Nacional Mayor de San Marcos) and José Roman Vargas (Sorbonne Université)

[299]

Cerro Malabrigo y el resurgimiento de la monumentalidad prehispánica en Chicama, Costa Norte del Perú

Desde el año 2020, el Programa Arqueológico Chicama (PRACH) ha realizado prospecciones sistemáticas y excavaciones en el valle de Chicama y área relacionadas. El objetivo principal es explicar la historia de la ocupación humana y los fenómenos sociales vinculados a tales poblaciones. Nuestras investigaciones han demostrado que una serie de temas y fenómenos sociales todavía quedan por investigar y comprender. Un ejemplo de ello es la presencia de monumentalidad arquitectónica prehispánica. De este modo, en esta ponencia describimos nuestra investigación sobre una de las estructuras monumentales prehispánicas más antiguas en el Cerro Malabrigo, ubicado al norte del valle Chicama. Este sitio es representativo de un proceso previamente poco teorizado del resurgimiento de la arquitectura monumental en el área de Chicama a principios del período Intermedio Temprano (200 aC-600 dC). Presentamos los resultados de nuestras excavaciones, incluido un análisis del inventario de artefactos, y fechados radiocarbónicos de esta estructura monumental. Finalmente, discutimos una serie de correlaciones sociales y temporales, así como la relevancia de Cerro Malabrigo dentro del proceso histórico precolonial.

Tantaleán, Henry [310] see Kelley, Alice

Tantaleán, Henry [299] see Roman Vargas, José

Tapia, Javiera [119] see Sitzia, Luca

Tapia Mendoza, Everardo [282] see Nadel, Samantha

Tardio, Katie [95] see Jazwa, Christopher

Tarkanian, Michael (MIT) and Elizabeth Paris (University of Calgary)

[83]

Stingless Beeswax in Mesoamerican Investment Casting Processes

Mesoamerican metal objects have been studied in-depth in terms of alloys and production techniques, but little work has focused on the foundry materials used in the prehispanic casting process. In modern foundry practice, synthetic waxes, paraffins, or processed European honeybee wax (from the *Apis* genus) are commonly used as pattern materials for lost-wax (or investment) casting. In the Florentine Codex, Sahagún describes a copal-wax mixture as pattern materials of the Aztec. This paper evaluates the combination of various species of stingless beeswaxes and copal species, in terms of thermal, mechanical, and rheological properties of these blends, and their applicability in casting. *Melipona beecheii* is a genus known to be cultivated by the Maya, but other stingless bee genera—like *Trigona* and *Frieseomelitta*—also inhabit the Maya area. Ethnohistorical sources describe widespread meliponiculture in prehispanic Mesoamerica at Spanish contact. Meliponiculture was common in Northern Yucatán where its products, honey and beeswax, were exchanged as commodities and used to pay provincial taxes. Archaeological evidence suggests that lost-wax casting formed an important component of Postclassic period Maya metallurgical technologies at the urban centers of Mayapán and Lamanai, including metallurgical ceramics and production debris. Beeswax was a prerequisite to developing these technologies.

Tarrant, Damon (Simon Fraser University)**[236]***Chair***Tarrant, Damon (Simon Fraser University), Laura Yazedjian (British Columbia Coroners Service) and Michael Richards (Simon Fraser University)****[236]***Application of Dietary Isotopes to Questions of Medicolegal Significance*

Isotopic analysis of human remains has been used in archaeological and forensic contexts to examine diets, mobility, and the geographical origin of individuals (Bartelink and Chesson 2019). We applied dietary isotope analysis, a method more commonly applied in archaeological science research, to 30 unidentified human remains from British Columbia, Canada, to explore whether this relatively inexpensive method can be used to separate out archaeological and modern (forensic) human remains. This project was on behalf of, and in collaboration with, the British Columbia (Canada) Coroners Service. We extracted bone collagen and measured carbon, nitrogen, and sulfur isotopes in the Archaeology Isotope Laboratory, at the Department of Archaeology, Simon Fraser University, Canada (Longin 1971; Brown et al. 1988; Collins and Galley 1998). Using K-means cluster analysis, the results clustered into two distinct groups; archaeological or contemporary. Radiocarbon dating was then used to confirm the findings of the isotope analysis and to ensure the correct attribution to the modern or archaeological clusters. Cases considered to be archaeological are returned to local communities for reburial, while those determined to be contemporary indicate possible forensic cases. This study shows the utility of applying methods mostly used in archaeological science to forensic research.

Tarry, Sarah, Reagan Hoehl and Erlend Johnson**[104]***Exploring Kisatchie's Deep Past: Findings from Site 16VN3416*

This poster presents the findings and analysis of artifacts from a 2 × 2 m excavation unit at site 16VN3416 in the Calcasieu Ranger District of Kisatchie National Forest. A large number of diagnostic lithic artifacts were recovered from this unit, spanning the millennia from the late Paleoindian period (10,000 BCE) through the Woodland period (1200 CE). The excavation encountered significant soil disturbances, bioturbation, and long-term taphonomic processes that complicate interpretations of archaeological contexts. Nevertheless, the density and diversity of diagnostic lithics from this unit can contribute to an understanding of 12,000 years of Native American lifeways in this region of western Louisiana. The fieldwork at site 16VN3416 also highlights the ongoing effects of tree falls and fires in Kisatchie National Forest, events that are likely to be worsened by climate change.

Tartaron, Thomas (University of Pennsylvania)**[17]***Linking Multiple Scales in Time and Space: Small Worlds and World-Systems Analysis*

This contribution proposes that world-systems analysis could benefit from greater consideration of a local-scale, or "small world," perspective. These maritime and terrestrial small worlds, defined by face-to-face interaction and often deeply embedded social and economic ties, are building blocks that can illustrate key aspects of how local-scale entities are constituted and how they might operate within a world system. Particularly, at this scale, we can observe the variability in the way that small worlds operate internally (e.g., hierarchically or heterarchically) and how they form linkages to external worlds, using a network approach that identifies the strong ties that bind them and the weak ties that link them to other (often larger) networks. It is also to be recognized that many small worlds within zones, such as the Aegean, that are engaged in the interactions that define a world system, are marginally or not at all integrated into those world systems. Several examples from the Bronze Age Aegean illustrate potential insights that might be derived from the small world perspective.

Tarulis, Elizabeth [319] see Ogden, Brigid

Tasa, Guy [300] see Garcia-Putnam, Alex

Tashmanbetova, Zhuldyz, Paula Doumani Dupuy (Nazarbayev University, Astana), Galymzhan Kiyasbek (Institute of Archaeology), Reed Coil (Nazarbayev University, Astana) and Aidyn Zhuniskhanov (Eurasian National University)
[23]

Concealed Archaeology of Kazakhstan: An Early Neolithic Burial from Koken

The period prior to the emergence of agriculture and pastoralism is one of the most understudied and least deciphered time periods in Eurasian steppe archaeology. A shortage of stratified or well-preserved early Holocene campsites means that our knowledge of this period heavily relies on lithic assemblages not always with associated ¹⁴C dates. Contrary to this norm, our excavations at the site of Koken in the semiarid steppe zone of eastern Kazakhstan recently uncovered stratified Stone Age deposits underlying a Bronze Age settlement. Within these earlier layers, our team has further discovered a paired human burial dating to the mid-sixth millennium BC. The Koken burial represents the earliest known, and directly dated, human remains within all of Kazakhstan, and hence offers scholars an exclusive opportunity to examine hunter-gatherer dispersals, lifeways, and population composition prior to the appearance of food producing economies in the region. In this paper, we consider the Koken site layout and contents as well as consider its potential utilization and social networks with other hunter-gatherer complexes of Eurasian. On a preliminary basis we position the early Neolithic burial from Koken within the thin landscape of its regional contemporaries in Baikal and Mongolia.

Tatem, Joy
[332]

Use-Wear Insight into the Chipped Stone Plant-Processing Toolkit in the Lower Pecos Canyonlands

The focus of this research was to analyze potential plant-processing chipped stone tools from several rockshelter and terrace sites in Eagle Nest Canyon within the Lower Pecos Canyonlands of southwest Texas, excavated by Texas State University from 2013 to 2017. The chipped stone tool assemblages' evidence heavy plant polish on both informal and formal tools. Archaeological evidence and ethnographic accounts from the greater Southwest and Mexico show that sotol and agave lechuguilla were important plant resources, processed in intensive earth oven facilities and used as a major fiber resource. However, the Lower Pecos lacks a formalized identification and analysis of the chipped stone tool assemblages associated with these plant-processing activities. Is there a correlation between informal or formal tool type and tool function? Were tool types used for singular or multiple activities? I will present a use-wear analysis of these plant-polished tools, analyzing wear patterns from experimental and archaeological assemblages in order to provide insight into the prehistoric chipped stone plant-processing toolkit.

Tavera-Medina, Carito (Universitat de Barcelona)
[129]

Un balance crítico del estudio del género en la arqueología peruana

¿Ha sido el estudio del género un campo de estudio sistemático dentro de la arqueología peruana? ¿Cuáles han sido los enfoques teóricos y metodológicos empleados? Y ¿qué tipos de contexto arqueológico se han empleado para dichos estudios? Por medio de la siguiente ponencia planteamos hacer un recorrido analítico sobre cómo ha sido abordado el estudio del género en el Perú prehispánico e identificar su impacto dentro de las interpretaciones realizadas por lxs arqueologxs sobre e las poblaciones prehispánicas. En esta ponencia buscaremos generar una visión historiográfica sobre como esta corriente teórica ha impactado en nuestra arqueología y como se ha reinventado en mano de arqueologxs locales y extranjeros.

Tavera-Medina, Carito [299] see Roman Vargas, José
 Tavera-Medina, Carito [299] see Tantaleán, Henry

Taylor, Christine [213] see King, Eleanor
 Taylor, Christine [213] see Walling, Stanley

Taylor, James [141] see Aitchison, Kenneth

Taylor, Luke [156] see Brady, Liam

Taylor, Marla (Robert S. Peabody Institute of Archaeology), Laura Bryant (Gilcrease Museum) and Laura Elliff Cruz (School for Advanced Research, Indian Arts Research) [72]

Culturally Appropriate Collections Stewardship: Creating an ICC Guide

For centuries, museums and academic institutions have acquired and amassed Indigenous cultural items for their own use and benefit with minimal consideration from descendant communities. The values expressed in stewarding those collections resonate throughout an institution. The Indigenous Collections Care (ICC) Working Group, established in 2021, advocates for stewardship approaches that privilege Native American knowledge and center concepts of culturally appropriate care for items in institutional collections. To meet these goals, the ICC Working Group is creating a guide, which will be a reference tool for institutions that interact regularly with indigenous collections. The guide will not teach museums how to specifically care for each item, since these vary among each community. It will instead offer achievable considerations and templates for implementation, advocacy, and creation of policies and procedures. This guide does not replace consultation or the repatriation process—instead, it is meant to help guide those conversations and provide a framework. The ICC Guide is contributing to and amplifying a fieldwide reimagining of how, and for whom, collections are stewarded.

Taylor, Marla [73] see Bryant, Laura
 Taylor, Marla [72] see Woods, Julie

Taylor, Sarah [53] see Cutright, Robyn

Taylor, William (University of Colorado, Boulder) [260]
Chair

Taylor, William (University of Colorado, Boulder) and Juan Belardi (Universidad Nacional de la Patagonia Austral) [260]

Early Domestic Horse Exploitation in Southern Patagonia: Archaeozoological and Biomolecular Evidence from Chorrillo Grande I, Argentina

The introduction of domestic horses following Spanish colonization transformed Indigenous societies across the grasslands of Argentina, leading to the emergence of specialized horse cultures across the Southern Cone. However, the relatively late establishment of permanent European settlement in Patagonia means that the dynamics of this introduction are poorly chronicled by historic records. Here, we apply archaeozoological and biomolecular techniques to horse remains from the site of Chorrillo Grande I, located in the Río Gallegos middle basin in the steppes of southern Argentina. Osteological and taphonomic analyses of these

horse remains suggest that horses were raised and used for food by Aónikenk people before the onset of permanent European settlement in the region, as early as the mid-seventeenth century. DNA-based sex identifications suggest consumption of both male and female horses, while residues from a ceramic sherd also show consumption of guanaco products. Sequential isotope analyses on dentition from the oldest specimen in the assemblage reveals an origin for the animal in southern Patagonia and, within this region, suggests the movement of these animals between the Río Coig (Coyle) and Río Gallegos basins. These results reinforce emerging evidence for extremely rapid and Indigenous-mediated dispersal of the domestic horse in the Americas.

Taylor, William [77] see Belardi, Juan

Taylor, William [200] see Buckser, Sarah

Taylor, William [23] see Hart, Isaac

Taylor, William [151] see Windle, Morgan

Taylor Riccio, Kia (Syracuse University)

[278]

Ambiguous Archaeology: Eating and Ceramic Styles in the Early Modern Caribbean

This paper underscores “ambiguity” and duality as pervasive factors in archaeological research through a case study of coarse earthenware from La Soye, Dominica. Within this framework, I concentrate my approach on syncretic foodways and ceramic productions, which blend, confound, and subvert straightforward interpretations. Using the material culture as a guide, I explore the fuzzy multitudes of Indigenous and colonial life. Specifically, I analyze local ceramics from three coastal loci—each within 1 km of La Soye Point. Early modern Dominica was an illicit colonial frontier and free Indigenous stronghold, making it an ideal space to analyze cultural ingenuity and maintenance in ambiguous environments. While our exact interpretations of the La Soye complex are in flux, the first locus is a probable Indigenous trade center occupied in the mid-seventeenth century. The second locus is a village site contemporaneous with the aforementioned trade center, and the third is a much earlier site from the late Saladoid or early Troumassoid period. The historical depth of these loci allows me to assess the impact of Kalinago, African, and European culture on Caribbean cuisine while understanding the power of ambiguity in frontier spaces.

Teeter, Wendy [8] see Gusick, Amy

Tejeda-Barillas, Lilian (Northern Arizona University) and Jaime Awe (Northern Arizona University)

[197]

Life, Death, and Renewal: Examining the Significance of Lowland Maya Sweat Baths in the Belize River Valley

Although sweat baths were an integral form of architecture in ancient Maya communities, these special architectural features have received limited attention from Maya scholars. In this poster, we address this omission through the examination of four recently discovered sweat baths from the sites of Baking Pot, Cahal Pech, Pooks Hill, and Xunantunich in the upper Belize River Valley. To understand the significance of sweat baths in this lowland Maya subregion, we address the following questions: What is the spatial context of sweat baths in western Belize? What were the sociocultural and ideological significances of sweat bath use in ancient Maya society? How do the uses of sweat baths in the Belize Valley compare to those in other regions of the Maya area? The value of this regional approach, as well as the sample size (four sweat baths), provides a more informed understanding of the significance and use of sweat baths in the upper Belize Valley specifically, as well as in the lowland Maya area in general.

Tejero Andrade, Andrés [152] see Chavez, Rene

Tejero Andrade, Andrés [252] see Pacheco Arias, Leobardo

Templon, Alannah and Mary Towner (Oklahoma State University)**[99]***Women in Early Twentieth-Century Oklahoma: Connections between Migration Histories and Reproductive Outcomes*
[WITHDRAWN]

Tepley, Gabriela [52] see Berryman, Judy

Terlea, Catalina [257] see Blake, Asher

Terlep, Michael**[264]***Conjoined Twins or Alternative Personas: An Analysis of Polycephaly within Southwest Rock Imagery*

Researchers, most recently Crown and colleagues (2016), have long highlighted the significance of polydactyly (having more than five digits on a hand or foot) within rock imagery and material culture across Mesoamerica and the American Southwest. Anthropomorphic and zoomorphic figures displaying polycephaly (multiple heads) is another frequent depiction across Mesoamerica and American Southwest rock imagery and material culture. While we currently lack paleopathological cases of polycephaly and/or conjoined twins in North American prehistory, such individuals would have likely held considerable importance and status. Globally, medical reports and artistic renderings of polycephaly/conjoined twins date back at least 2,000 years and were often incorporated into mythology. Alternatively, polycephalic depictions may reflect dual or multiple symbolic or pragmatic roles, genders, or personas of individuals within a community. This presentation explores depictions of polycephaly within Southwest rock imagery and proposes that such imagery reflected actual or allegorical accounts of conjoined twins or alternative personas.

Terlep, Michael [283] see Francis, Kristen

Terlep, Michael [103] see Harry, Karen

Terradas, Xavier [162] see Belmiro, Joana

Terrell, John (Field Museum of Natural History)**[323]***Archaeology, History, and Modeling the Past: Neglected Assumptions*

For archaeologists, finding something from the past is more than its own reward. When what they have “recovered” can be interpreted as playing plausible roles in convincing historical narratives, they have reason to believe they are doing something extraordinary: fleshing out our ignorance of history with factual evidence of what may have truly happened. For several decades now, some archaeologists have championed using social network analysis (SNA) to tease out statistically how the relative spatial positioning of things, places, and people may have informed what could (or couldn't) have happened in the past. Last year my colleagues and I introduced an alternative strategy for using relational analysis in archaeology and other historical sciences. Instead of reconstructing spatial ties as the principal goal, we argue that relational thinking can be used to develop testable hypotheses about covariation and causal patterning. While the hypotheses considered can be about how differing spatial relationships could have been instrumental in the past, they need not be. Using the modeling strategy we call dynamic relational analysis (DYRA), they can also be about relationships—causal contingencies—of many forms among things, places, and people.

Terry, Richard [213] see Bair, Daniel

Tessone, Augusto [77] see Reyes, Omar

Testard, Juliette (CNRS & Université Paris I Panthéon-Sorbonne)

[214]

Chair

Testard, Juliette (CNRS & Université Paris I Panthéon-Sorbonne) and Claudia Alvarado

[214]

Xochicalco and Teotenango: New Approaches on Their Interactions (750–1150 CE)

Since the 1950s, Xochicalco (Morelos) and Teotenango (state of Mexico) have been constantly compared and assumed as two Epiclassic cities. The hypothesis of their contemporaneity and interaction is derived from their similarities in terms of location, visual culture, sculptural style, and glyphic system. However, upon reviewing and approaching the data provided by archaeological research in a more systematic way, there is a remarkable series of differences in terms of chronological sequence, spatial organization, and ceramic and lithic material, among others. The examination of the available visual and material culture leads us to consider that, if there was an interaction between these two sites, it was in the Xochicalco–Teotenango direction and, furthermore, other sites in the southern region of the State of Mexico and the Toluca Valley (such as Santa Cruz Atizapán and Malinalco) had a fundamental role in these relationships. Xochicalco and Teotenango shared features that are present in several city-states that were part of the Epiclassic network of the central Altiplano, such as Cacaxtla-Xochitécatl and Tula Chico, but also toward the east and north.

Tetrault, Tara and Suzanne Johnson (Sugarland Ethnohistory Project & Museum)

[293]

Partnering with Descendant Communities: Investigating the Dorsey Site, an 1874 African American Farm in Sugarland, Maryland

The current symposium explores how professional archaeology is changing. In the past 25 years, we have increased partnerships, and collaboration, with descendant voices changing the practice of archaeology. Toward that end, in 2020 the Sugarland Ethno-History Project (SEHP) leadership initiated the investigation of the Basil and Nancy Dorsey's 1874 smallest farm in Sugarland. Sugarland, Maryland, is one of the best-documented historic African American communities in the county. Founded in 1871, Sugarland once boasted a church, a community hall, a US Post Office, a grocery store, and a school. In 2020 the SEHP published its history in a book and the following year published the first Dorsey Site Archaeology Report, a virtual exhibit and walk-through, as well as an Archaeology Curriculum Module for K–12 teachers. Working closely with the SEHP Board and Sugarland Descendants, I was able to incorporate their voices into reports and curriculum. Working together meant we imparted to young people the realities of thriving in an early African American community. By interpreting the Dorsey Site, we enhance Sugarland's written history and broaden the conversation to include contributions African American people made to society.

Texis Muñoz, Ariel (University of California, Riverside), Nawa Sugiyama (University of California, Riverside) and Saburo Sugiyama (Arizona State University; Okayama University)

[248]

Extending Teotihuacan's Past: Ceramic Insights from Lidar-Based Surface Survey

In this presentation, we will explore the density patterns of ceramics in the Teotihuacan Valley, from the Patlachique phase to the Mexica occupation. Our research is based on an initial ceramic analysis conducted using a recent lidar-based surface survey. To manage and visualize the density maps more efficiently, we integrated the collected data into a geographic information system. We aim to offer a fresh perspective on the relationship between the distribution of ceramics and the topography of the Teotihuacan landscape, given that the collected materials are linked to the lidar map. We have already tested the Patlachique Phase, and we observed a shift in the occupation's elevation during that phase, followed by significant variations in subsequent ones. The close connection between the collected materials and the lidar map offers new

information that may not have been clear previously. With the lidar map covering most of the Teotihuacan Valley, our vision extends beyond the ancient city's core area, allowing us to reinterpret the connection between the central area's primary occupation and its peripheries.

Thacker, Paul (Wake Forest University) and Carlos Periera (Câmara Municipal de Rio Maior) [29]

Castros and Cordage: Recognizing Contextual Evidence of Iron Age Practice at São Martinho

Castro settlements, prominent from the Late Chalcolithic through the Iron Age in western Iberia, are often described as hillforts or defensive hilltop villages. The delineation of sites as *castros* often influences archaeological interpretations, bolstering focus on the strategic advantages of the geographic settings for population and herd protection, resource and network access, landscape control, or projections of political power. Excavations at Castro de São Martinho in central Portugal have revealed that spinning and cordage production were important components of the everyday secondary products economy, findings that challenge the potential reductionism of location-driven narratives. While direct recovery of fiber artifacts is extremely rare due to basalt-derived sediments, spindle whorls were found in most excavation blocks at São Martinho. This presentation explores the context of a spindle whorl set associated with a large firepit feature that included abundant macrobotanical remains of inedible, poor-burning flowering and shrub plants. Local ethnographic investigation and experimental replication indicate that some of these plant tissues are suitable for manufacturing adjective dyes. The São Martinho case illustrates the benefits of considering past cordage and textile practices during hypothesis formulation and the need for developing understandings of archaeological features resulting from fiber processing and dyeworks.

Thaher, Ahmad [265] see Macdonald, Danielle

Thakar, Heather (Texas A&M University), Gina Buckley (University of Missouri Research Reactor [MURR]) and Jason De Leon (University of California, Los Angeles) [236]

Mapping Human Migrations, Past and Present: Developing Environmental Isotope and Trace Element Maps of Mexico and Central America

Thousands of clandestine migrants die every year while traversing the hostile terrain of the US-Mexico border. Most of these individuals go unidentified, leaving families in a desperate search for answers regarding their loved one's whereabouts. Rural counties along the South Texas Borderlands lack resources for full forensic documentation, investigation, and identification of poorly preserved human remains. In such cases traditional methods and even DNA studies are unproductive. Our team is developing a dual-language, open-access, geospatial database of environmental isoscapes and trace element distributions that will facilitate the research of future archaeologists, public health researchers, wildlife ecologists, conservation scientists, and innumerable other Latin American scholars. Our goal is (1) to advance modern forensic investigations and humanitarian repatriation of human remains from Texas and other US border states and (2) to accelerate scientific studies of past and present human migration, health, and landscape transformation.

Thakar, Heather [157] see Neff, Hector

Thakar, Heather [202] see Wann, Kevin

Thakar, Heather [29] see Willis, Staci

Thakar, Heather [128] see VanDerwarker, Amber

Thiaw, Ibrahima [267] see Douglas, Diane

Thirouard, Constance (CNRS UMR8096 / Univ. Paris I- Panthéon Sorbonne)**[307]***Chair***Thirouard, Constance (CNRS UMR8096 / Univ. Paris I-Panthéon Sorbonne) and Claire Alix (CNRS UMR8096 / Univ. Paris I-Panthéon Sorbonne)****[307]***Studying Past Iñupiat Legacy Collections from the Kobuk River, Northwestern Alaska: Challenges and Benefits of Developing an Integrated Database*

Iñupiat collections from archaeological sites located along the Kobuk River, excavated by J. L. Giddings, D. Anderson, and C. Hickey in the 1940s and 1960s, are held at the University of Alaska Museum of the North and the Brown University Haffenreffer Museum of Anthropology. Their joint study requires detailed cataloguing of artifacts and all associated contextual information (site and feature descriptions, maps or photographs, field notes, and other existing archival documentation), thus generating vast amounts of heterogeneous yet interconnected data. With basic technical and programming knowledge and limited means, we use free, open-source, and institutionally supported software to build a database able to support large datasets of various natures and allow complex queries. One of our goals is to standardize the terminology used to designate and describe past Iñupiat archaeological artifacts, revisit conventional functional classifications, and reconsider assemblage variability within and between sites. Combined with a dating program and settlement patterns analysis, our research aims to ultimately provide a better understanding of the last 600 years of precolonial occupation in and around the Kobuk River region.

Thomas, Christian [120] see Rasic, Jeffrey

Thomas, Christian [120] see Sattler, Robert

Thomas, David (American Museum of Natural History)**[219]***Discussant*

Thomas, David [41] see Freund, Kyle

Thomas, Dayna, Andrew Womack (Furman University), Anke Hein (Oxford University), Ole Stilborg and Katherine Brunson**[173]***Rediscovering the Andersson Collection: 100 Years Later*

Johan Gunner Andersson's collection of artifacts excavated from archaeological sites in northern China has been residing, largely unstudied, in the storage rooms of the Museum of Far Eastern Antiquities, as well as other institutions, for nearly 100 years. During this time a variety of inventory systems, loans, reorganizations, and moves has led to uncertainty about the extent, location, and original context of much of the material. Using Andersson's excavation notes, museum records, photos, and unpublished materials, the Excavating Andersson project endeavors to catalogue the collection and reconnect the material to its original contexts. The goal of this project is to make the collection more accessible for future research and analysis. Here I present preliminary findings of the project on the contents and context of the Andersson collection and our methods for creating an open-access database accessible for future research.

Thomas, Geoffrey [72] see Smith, Catherine

Thomas, Jayne-Leigh (Indiana University)**[97]***Discussant*

Thomas, Jayne-Leigh [8] see Krupa, Krystiana

Thompson, Amy (University of Texas, Austin)**[74]***Discussant***Thompson, Amy (University of Texas, Austin) and Adrian Chase (University of Chicago)****[301]***Whose Land? Governance of Land Tenure, Property, and Inequality in the Maya Lowlands*

The role that governance and property regimes play in the everyday life of citizens is something we grapple with, actively or passively, every day. In the archaeological record, these topics often prove challenging to evaluate without written records. However, using robust survey data from settlements and civic-ceremonial/administrative architecture in conjunction with high-resolution and multiproxy dating and spatial analysis, we address these questions in the Maya region while considering bottom-up and top-down approaches at multiple scales. We evaluate the role of governance on economic, political, and environmental inequality among more than 40 Classic Maya cities. We bolster this broader survey with two case studies, one from the large Maya city of Caracol in central Belize and the second from the medium-sized cities of southern Belize, discussing the dynamic interplay among settlement selection, governance, and differential access to resources as these communities developed, persisted, and declined over hundreds of years. Our work highlights the heterogeneity of ancient Maya sociopolitical landscapes and the implications of changing governance and communities.

Thompson, Amy [251] see Chase, Adrian

Thompson, Amy [295] see Mixer, David

Thompson, Ashleigh [88] see Doelle, William

Thompson, Jordan (Washington State University), Rachel Horowitz (Washington State University) and John Blong (Washington State University)**[265]***A Reanalysis of the Weitas Creek Site (10CW30): An Early Nez Perce Upland Hunting Camp*

The Bitterroot Mountains mark both an ecological and social margin between the Southern Columbia Plateau and the Plains region. The Nez Perce (Nimiípuu) Tribe traditionally followed a seasonal subsistence cycle routinely crossing these ecological and social boundaries, referencing long-term landscape and resource knowledge while negotiating complex social interactions. The Weitas Creek site (10CW30) is situated along the North Fork of the Clearwater River, in north-central Idaho, within the ancestral homelands of the Nimiípuu at the western edge of the Bitterroots. Weitas Creek was previously interpreted as an upland hunting camp containing Windust and Cascade phase technologies, estimated to be 12,000 or more years old. Because of the lack of radiocarbon dates and coarse-grained excavation methods, the original analysis divided the site's occupation into four broad phases, and roughly estimated their age based on the lithics recovered. This poster presents a reanalysis of the site through limited fine-grained excavation, chronometric dating, geoarchaeological analysis, paleoethnobotanical analysis, lithic analysis, and nondestructive geochemical sourcing of stone artifacts. These analyses provide a refined understanding of the chronology and antiquity of the Weitas Creek site and help to explore changing landscape and resource use in the context of social dynamics in a liminal territory.

Thompson, Jordan [281] see Blong, John

Thompson, Victor (University of Georgia)

[56]

A Comparative Consideration of the Institutions of Governance of the Native American Polities of Florida

Florida once encompassed a vast landscape of Native American polities prior to and after the arrival of European colonizers. More northern groups in the region relied on fishing, hunting, and gathering, but also practiced maize agriculture to varying degrees. Further to the south, the vast majority of people living in these areas relied solely on fishing, hunting, and gathering to support large Indigenous populations that lived in small settlements and densely occupied urban environments. The geopolitical landscape of Florida was not static but rather a dynamic place of alliances, cooperation, and conflict that ebbed and flowed at different spatial scales. In this presentation, I compare institutions of collective action across the Florida political landscape. Specifically, I consider institutions of governance (e.g., councils, longhouses, confederacies, tributary town, royal marriage, etc.) at both intra- and inter-settlement levels among the different polities in the region. This comparative analysis demonstrates that political complexity in the region was not dependent on agriculture and that similar institutions emerged among different groups under a variety of economic systems. That said, there are key differences among these peoples that suggest how collective action was organized to solve varied societal challenges across the landscape.

Thompson, Victor [229] see Ardren, Traci

Thompson, Victor [287] see Farace, Anthony

Thompson, Victor [233] see Gragson, Ted

Thompson, Victor [229] see LeFebvre, Michelle

Thompson, Victor [232] see Pluckhahn, Thomas

Thompson, Victor [259] see Oliveira, Cristina

Thomsen, Tamara [154] see Schroeder, Sissel

Thornton, Erin (Washington State University)

[183]

Chair

Thornton, Erin (Washington State University), Kitty Emery (Florida Museum of Natural History), Camilla Speller (University of British Columbia), Aurelie Manin (Oxford University) and Joel Piñon (Universidad Nacional Autónoma de México)

[183]

Dietary Evidence for the Timing and Diversity of Mesoamerican Turkey Husbandry

In the absence of morphological changes, clear genetic markers, and pen structures, the archaeological evidence for turkey (*Meleagris gallopavo*) husbandry and domestication in Mesoamerica relies primarily on identifying dietary shifts in ancient turkeys. As in the American Southwest, captive Mesoamerican turkeys exhibit greater consumption of maize than their wild counterparts. Although this general pattern has been identified, emerging isotopic work has also documented diversity in past turkey diets, which may indicate complex and varied husbandry practices across space and through time. Current isotopic datasets are also skewed toward later time periods (Classic-Postclassic) and lack adequate coverage of the Preclassic period, which is critical to understanding the origins of Mesoamerican turkey domestication. The stable carbon ($\delta^{13}\text{C}$) and nitrogen ($\delta^{15}\text{N}$) isotopic dataset presented here provides expanded geographic and temporal coverage of Mesoamerican turkey husbandry and domestication and informs our understanding of past human-turkey interactions in this region.

Thornton, Erin [185] see Black, Valda

Throgmorton, Kellam [172] see Primeau, Kris
 Throgmorton, Kellam [335] see Turner, Michelle

Thurston, T. L. (SUNY Buffalo)
[301]

Salmon Wars: Medieval through Early Modern Land Tenure and Social Change in Northern Conflict Landscapes
 Into the earlier, local common pool resource systems of Iron Age and early medieval Scandinavia, the increasingly incompatible taxation and land tenure concepts of developing state governments were imposed on Arctic and peri-Arctic populations. This paper examines the archaeological and historic record of conflicts, disputes, and uprisings that unfolded around fishing rights along rivers and coasts, as royalty, aristocrats, priests, and commoners of both Indigenous and Nordic extraction squabbled and clashed over control of salmon and salmon-fishing infrastructure. The Swedish tradition, in which legal negotiation between peasants and the state was the norm, persisted through periods of extreme autocracy and militarism as well as eras in which property and other rights were more equitably apportioned.

Thurston, T. L. [91] see Wilson, Kathleen

Tichinin, Alina (California State University, Chico) and Eric Bartelink (California State University, Chico)
[100]

Application of Archaeometric Methods to Forensic Anthropology Casework to Resolve Medicolegal Significance
 Human remains cases processed through the medicolegal system come from a variety of different circumstances. Protohistoric and prehistoric human remains are often submitted to law enforcement, and these remains often lack burial context and provenience. This presents a problem not only for law enforcement, who curate the remains as an unresolved case, but also for tribal communities who want ancestors repatriated. If the remains are Indigenous, lack of resolution means that the ancestors of a tribe are not rightfully reunited with their people. In forensic anthropology casework where it is suspected that remains could be archaeological, a triage method is needed for determining medicolegal significance. Archaeometric methods, such as radiocarbon dating and stable isotope analysis, can provide information that can resolve these cases and lead to successful repatriation. Radiocarbon dating can determine whether remains are ancient, historic, or modern, whereas stable isotope analysis can be used to provenance remains to possible regions where they originated. We report on four case studies from California that demonstrate the use of these methods to resolve forensic anthropology cases that were not of medicolegal interest.

Tiedens, Shari
[69]

Power or Privilege? Parallel Gender Hierarchies in the American Southwest
 This poster explores the concept of parallel gender hierarchies as applied to the Hohokam culture of the American Southwest. Bioarchaeological work in regions adjacent to the Hohokam area has revealed evidence of sexual inequality within multiple sites, presenting as poor health and less elaborate burial treatment for females compared to males. More nuanced analysis reveals that the impacts of these inequalities were distributed unevenly between females, indicating an intersectional aspect to this marginalization. Among the Hohokam, archaeological evidence for sexual inequality also exists, though comparing osteological data is difficult, due to the widespread practice of cremation. Instead, sexual differentiation in mortuary assemblages and the existence of some high-status female burials have been interpreted as evidence for complementary gender roles resulting in parallel hierarchies for men and women. Because social divisions by sex are often considered “horizontal” rather than “vertical,” it is implied that these separate hierarchies were essentially equal. By contrast, investigations of intersectional inequality can explore gender as a vertical class system interacting dynamically with other statuses and identities. Such an analysis presents a compelling alternative

explanation for the fact that, when treated as an undifferentiated group, Hohokam females display less evidence for wealth, power, or prestige than males.

Tierney, Jessica [55] see Worthey, Kayla

Tiesler, Vera (Universidad Autónoma de Yucatán) and Guilhem Olivier (Universidad Nacional Autónoma de México)

[79]

The “Hands of God” as Instruments of Death and Creation: Physicality, Embodiment, and Symbolism of Sacrificial Knives in Mesoamerica

In this talk, we shall analyze sacrificial knives in Mesoamerica’s (bio)archaeological record, among written sources, and iconography. Our survey emphasizes the diversity of cutting weaponry through time and cultural spheres. By combining forensic evidence with the material study of sacrificial knives, swords, and blades, put into perspective the implements with particular practices of laceration and penetration of the human body during and after sacrificial immolation. Their representations in codices and especially the specimens in museums allow us to approach the study of the handles, some with a rich iconography. We also find deities in the form of knives such as Itztli and Iztapaltótec in the codices and a large corpus of knives with divine attire in the ritual deposits of the Templo Mayor. Thus, deities such as Quetzalcoatl, Tlaloc, Xiuhtecuhtli, and Xochipilli were represented as flint knives with different characteristic attire. The symbolism of flint is linked to sacrificial death but also to the birth of gods from knives represented in codices and illustrated in myths and to concepts of fertilization. For all of the above, the flint knife materializes one of the main significations of human sacrifice: to generate life from death.

Tiesler, Vera (Universidad Autónoma de Yucatán)

[212]

Discussant

Tiesler, Vera [194] see Hernandez-Bolio, Gloria

Tilleux, Caroline [37] see Lemaitre, Serge

Ting, Carmen

[21]

The Curse of Classic: Rethinking the Agency of Maya Ceramic Production

Rooted in the Eurocentric concept of Classical antiquity, the “Classic” period is considered to have epitomized Maya civilization, standing in contrast to the developments that characterize the periods that came before and after. This dichotomy not only frames the way we categorize ceramic assemblages—the most abundant evidence in the archaeological record—but also influences how we interpret the agency behind ceramic production and consumption. In this paper, I will draw from two case studies to demonstrate that a high level of skills and specialization in the production of fineware ceramics was not a feature exclusive to the Classic period. The first case study focuses on the polychrome vessels from Nakum dating to 100/50 BCE–300/350 CE (Protoclassic period); the technology used to make these locally produced vessels exhibits clear signs of potters’ effort to increase their production with both social and economic value. The second case study highlights the central role played by the potters in making manufacturing decisions in the production of fineware ceramics in the Central Maya lowlands during 800/850–1200/1250 CE (the transition from Classic to Postclassic period), even though the mode of specialization evolved through time.

Tinsley, Gaylen [335] see Franklin, Jay

Titelbaum, Anne (University of Arizona College of Medicine, Phoenix), Bronwyn McNeil (Science World British Columbia), Samantha Fresh (College of Charleston) and Bebel Ibarra Asencios (Tulane University)

[185]

Chullpa Use in in the Ancash Region of Peru: Insights from the Discovery of Multiple Rare Developmental Conditions at Marcajirca (AD 1000–1650)

Situated on a steep-sided mountain slope on the eastern side of the Cordillera Blanca in the Ancash region of Peru, the Late Intermediate–early colonial period (AD 1000–1650) site of Marcajirca consists of residential, public, and funerary areas. Interment contexts include 35 aboveground walled tombs (chullpas). While it is logical to suggest these open sepulchers were used by kin groups, such suggestions of tomb use and prehistoric social structure tend to be based on colonial records and ethnographic analogy, and less frequently on the human remains themselves. Archaeological testing of eight tombs produced an MNI of 250 adults and 110 subadults. Among the remains, two rare heritable developmental conditions were observed among multiple individuals from different tombs: brachydactyly (MNI=3, 2 tombs) and Madelung's deformity (MNI=2, 1 tomb). Given the rarity of each of these conditions, it is likely the individuals were related. This presentation will consider these findings in the context of understanding chullpa use. These cases offer insight into cultural practices, suggest the continued use of the site over time by an extended kin group, and underscore the importance of identifying rare developmental conditions in the archaeological record as their presence may indicate genetic relationships within or among archaeological cemeteries.

Tizzard, Louise [57] see Evans, Amanda

Tlapoyawa, Kurly (Chimalli Institute of Mesoamerican Arts)

[65]

Discussant

Tlapoyawa, Kurly (Chimalli Institute of Mesoamerican Arts)

[302]

Yankwik Mexiko: Contributions of Mesoamerican People to New Mexican History

Mesoamerican contributions to the state of New Mexico are often overlooked within mainstream “hispano” historical narratives. What little information is shared is usually relegated to trade routes and modes of exchange during the prehistoric period. The European invasion and subsequent colonization of New Mexico saw an influx of Mesoamerican peoples from various cultural groups. These individuals played an impressive role in shaping the cultural landscape of the New Mexico we know today. By exploring the various ways in which modern Chicano/Nuevomexicano identity was influenced by the Mesoamerican progenitors, we will help shed light on a history that is all too often ignored.

Tobón Grajales, Santiago [47] see Wesp, Julie

Todd, Lawrence (GRSLE)

[219]

Discussant

Todd, Lawrence [171] see Burnett, Paul

Todd, Lawrence [265] see Dalmas, Daniel

Todisco, Dominique [9] see Martin, Fabiana

Toffolo, Michael [93] see Alonso Eguiluz, Monica

Tokovinine, Alexandre (University of Alabama)

[159]

Discussant

Tokovinine, Alexandre (University of Alabama), Sandra Balanzario Granados (Centro Regional, Instituto Nacional de Arqueología), Dmitri Beliaev (Knorozov Center for Mesoamerican Studies), Clara Alexander (University of Alabama) and Dana Moot (University of Alabama)

[159]

Kaanu'l Lords in Quintana Roo: New Data from Dzibanche and Resbalón Monuments

Redocumentation and analysis of inscribed monuments from the archaeological site of Dzibanche and its vicinity have revealed new details of the history of the Kaanu'l polity during the Classic period. The presentation centers in particular on the narratives recovered from the hieroglyphic stairways of El Resbalón, which contain one of the earliest known attempts to contextualize the rise of Kaanu'l—as seen by its political allies and clients—within a broader historical framework stretching as far back as the fourth century BC. The inscriptions of El Resbalón also suggest previously unknown kinds of roles that subordinate and allied lords may have played at the Kaanu'l royal court.

Tokovinine, Alexandre [90] see Moot, Dana

Tokovinine, Alexandre [159] see Velásquez García, Erik

Tollner, Hailey

[320]

Water Management from the Maya Lowlands: Implementing Archaeology in Mutual Aid

The capitalist world system in place today has caused resource insecurity and social vulnerability for groups all over the world, pushing people to depend on bureaucratic leaders to solve these issues. The archaeological record, as well as some responses to recent disasters, shows the benefit of mutual aid–style networks of action allowing communities to survive in spite of the hierarchical systems that push to dissolve their autonomy. Looking to the future of our communities and our planet, it is important to create sustainable infrastructure networks to meet the needs of communities without relying on governmental aid. In this presentation, I discuss the example of the so-called Maya “collapse,” and how elite leaders fell while small farming communities have survived to this day. In particular, I focus on the water management networks utilized by Maya communities of different sizes and outline the biosphere reservoir as a potential method of attaining both social and ecological sustainability. The goal of this presentation is to highlight the use that archaeology can bring to conversations of capitalism and resistance, as well as how archaeology can provide examples of potential sustainable systems for autonomous communities to put in place.

Tomazic, Iride (University of Michigan)

[130]

Chair

Tomazic, Iride (University of Michigan)

[130]

Conclusion: Living within and with the Wetlands

Wetlands are valuable ecosystems for many animal species, but they also present critical ecosystems for humans. By protecting against floods, erosion and improving water quality, wetlands present a valuable source for human food procurement and activities. In this paper, I exemplify the role of wetlands from the Southern Carpathian Basin by presenting settlement evidence for the human-wetland interaction during the Copper

(4500–2700 BC) and Bronze Age (2700–1500 BC). By showing how different communities utilized wetlands for over 2,000 years, I stress the importance and coexistence with such ecosystems in the region in the past. To conclude, this paper will also stress how society undermined wetlands' importance from the nineteenth century onward. Seen in lieu of recent natural disasters, climatic changes, and lack of water management practices, this study hopes to emphasize the importance of such ecosystems and advocate for the maintenance of those still remaining.

Tomczyk, Weronika (Stanford University)

[215]

Chair

Tomczyk, Weronika (Stanford University)

[215]

Camelid Pastoralism in the Wari Empire and Its Political Implications

The South American camelids had tremendous importance for basic subsistence, social life, and religion in all prehispanic Andean societies, but implications of herding domesticated llamas and alpacas for broader political systems have received less academic attention. This study uses the camelid remains as a proxy to study pastoral traditions within the political apparatus of the Wari Empire (ca. 600–1100 CE, modern-day Peru). The overview of current evidence from southcentral Wari territories combined with novel zooarchaeological and isotopic (C, N, O, and Sr) results from northern Wari sites implies that herding strategies were strongly influenced by preexisting local practices of animal husbandry, which led to different political consequences in each subjugated province. This research suggests that camelid herding was an indispensable tool in the Wari imperial repertoire, reflecting practices of ecological engineering and trajectories of regional governance.

Tomka, Steve [24] see Hays, Christopher

Tonoike, Yukiko (Yale University)

[61]

Chair

Tonoike, Yukiko (Yale University), Stefan Smith (Centre of Excellence in Ancient Near Eastern Empires) and Frank Hole (Yale University)

[61]

Remote Sensing and Ground Truthing: Revisiting the Middle Khabur, Northeastern Syria

Between 1986 and 1994, the Yale University Khabur Basin Survey Project (KBP) carried out archaeological surveys of the middle Khabur region of northeastern Syria and recovered ceramic and lithic artifacts from 257 sites dating from the Paleolithic to the Ottoman period. Following these ground investigations, in 1998, Nicholas Kouchoukos used Landsat images to assess environmental variables for the sites that had been discovered for his dissertation. Subsequently, Smith carried out a comprehensive analysis of CORONA images from the 1960s and 1970s for his 2015 PhD dissertation, identifying potential archaeological sites over this large region. From 2020, Tonoike and Hole, as part of the final report of the KBP, used a combination of GPS points, hand-marked sites on topographic maps, field notes, and Google Maps satellite imagery in an attempt to plot all sites in the survey area. This paper compares the results of these various survey methodologies and interpretations and emphasizes the efficacy of combining diverse remote-sensing data together with ground truthing and experiential knowledge of the regions to provide a holistic view of a complex archaeological landscape.

Toombs, Garrett (Washington State University) and Rachel Horowitz (Washington State University)**[282]***An Experimental Analysis of Water Content on Stone Raw Material Quality*

It is well known that heat treating chert and other cryptocrystalline silicates improves the stone's quality for knapping. However, ethnographic texts report that Indigenous knappers from around the world evaluate a stone's moisture content as a marker of the stones' quality for flaked tool production. Contemporary Euro-American flintknappers make similar claims. Despite the shared discussions by Indigenous and Euro-American flintknappers on toolstone moisture content, previous studies of flaked stone materials have not been conducted to evaluate the proposed relationship. This study utilizes a flintknapping experiment to quantify the impact of moisture content on raw material quality for tool production by measuring the length of pressure flakes removed from materials with varying moisture content. This poster provides an experimental evaluation of the role of moisture content in flaked stone tool production and integrates Indigenous perspectives on stone into lithic studies. We find that added moisture increased the length of pressure flakes removed of knapping. These findings are particularly important for experimental knappers who use raw materials which were previously extracted from the ground, and who may wish to rehydrate the toolstone before knapping.

Toreniyazov, Azizkhan [42] see Apuzzo, Cassandra

Torquato, Melissa**[224]***Data Inconsistency and Multi-site Analyses: Using Multilevel Modeling to Transform Archaeological Data*

For over a century, the proliferation of archaeological excavations in the United States has generated a large amount of archaeological data. Much of this data is published in archaeological reports that are housed in state-run archives. These archives offer a wealth of information for scholars who explore research questions that require multisite analyses. However, the lack of consistency in reporting can make it difficult to combine data from previously excavated sites. Specifically, if data is reported in different units (e.g., weights vs. counts), it can be difficult or impossible to use in the same analysis. To explore this issue, I present a case study that examines using botanical remains to study dietary trends in the Interior Eastern Woodlands. I use multilevel modeling to transform weight data from count data for seven nut types, providing a stable basis for comparison across sites. This analysis explores how statistical methods can be used to address reporting inconsistencies between sites, thus allowing previously excavated data to be used in multisite analyses.

Torras Freixa, Maria (Boston University; ERAAUB; University of Barcelona), Ivan Briz i Godino (University of Barcelona; CONICET; University of York), Virginia Ahedo (Universidad de Burgos), José Manuel Galán (Universidad de Burgos) and Natalia Moragas (ERAAUB; IUAB; University of Barcelona)**[198]***Exploring Biological Sex Inequality through Mortuary Practices at Teotihuacan: A Machine-Learning Approach*

Individualities have been difficult to identify in Classic period Teotihuacan, as this multiethnic urban culture presents itself as a faceless society where inequality must be addressed with new perspectives and methodologies. In this poster, we explore whether this inequality is perceptible through biological sex differentiation in mortuary evidence, e.g., burials and sacrifices, at Teotihuacan. We analyze this hypothesis through a machine-learning approach. The results of our research indicate that graves do not present differential patterns by biological sex. However, biological sex was an important factor in the sacrificial burials of the Temple of the Feathered Serpent. These results offer a deeper insight into social inequality and individual roles at Teotihuacan, highlighting the potential of computer science to understand human interactions in a complex social network of plural identities underrated in the archaeological record.

Torreggiani, Irene (University of Oxford), Lina Cabrera Sáenz (Florida Tech), Eldetello Castilla (Community of Aguas Buenas, Chontales, Nicaragua), William Harvey (Oxford Systematic Reviews LLP) and Alexander Geurds (University of Oxford)

[158]

Those Flowering Waters: Reconstructing 1,200 Years of Human Adaptation to Hydroclimatic Changes in Central Nicaragua

Central Nicaragua is highly susceptible to hydroclimatic variations, which are affecting the subsistence economies of local populations. To what extent hydroclimatic changes impact prehispanic adaptation strategies in the Mayales River Valley (MRV)? This presentation will show the final result of the Interdisciplinary Archaeological Project Finca Santa Matilda (PRISMA), which integrates the geoarchaeological analysis of Roberto Amador site (RA: AD 900–1250) and the multiproxy palynological analysis of a 1,200 yr core from El Tigre-Asososca lake (León). Prehispanic human responses to the incidence of inundations is evidenced in RA by a strategic use of the site landscape and differentiated use of alluvial terraces. The inundation that affected the site around AD 1250 ultimately likely led to its abandonment and unveils how the human communities living in the MRV used adaptive settlement strategies to relocate when exposed to major fluvial changes. By comparing the archaeological data from RA to the paleoclimatic record produced by the authors, it is possible to correlate this inundation to regional hydroclimatic developments. This study shows that human communities of the MRV had a constant and dynamic relationship with the fluvial environment of the valley, unveiling how rivers are active forces that intimately shape human societies.

Torreggiani, Irene [157] see Arce Buitargo, Tomas

Torrens, Shannon

[24]

Strings of the Past: Revisiting the Lapidary Industry of Poverty Point

The Poverty Point culture has long been recognized for the abundance and variety of stone beads that can be found at both large mound centers, like Poverty Point and Jacketown, and smaller sites, like Slate. Tubular, barrel, disc, and effigy beads that depict owls and other birds are found at Poverty Point affiliated sites throughout Louisiana and Mississippi, and even as far away as Florida. Beyond simple admiration for the artistry evidenced by the beads, a close examination of the manufacturing wear suggests makers utilized different toolkits and processes to achieve their results. By documenting variation in bead production and mapping the distribution of bead styles across the landscape, we can begin to gain insight into cultural identity, exchange, and interaction among communities of the Lower Mississippi Valley and Gulf Coast.

Torres, Christina (UC Merced)

[246]

The Question of Permanence: Understanding Head Shaping as a Process

Recent conversations about body modification demonstrate that alterations to human form are experiential and are not solely oriented toward a final product. In thinking of prehistoric head shaping practices—practices engaged in with the bodies of infants—archaeological perspectives are frequently necessarily focused on the marks of the practice on the adults. In contrast, placing attention on the process of head shaping as part of the acts of child-rearing moves discussion into a consideration of infancy, parenthood, and the actions that inform what is deemed proper child-rearing. Shifting focus from an archaeologically visible aesthetic to one that is structured around the appropriate ways to treat an infant moves the discussion away from a focus on the practice as inherently having an end goal of permanence. To that end, here I consider approaches to permanence from architecture and art history to shape our understanding of the body as a dynamic thing. I present a broad appraisal of cranial vault modification from ~1,700 individuals who lived in northern Chile before the colonial era, arguing that perhaps permanence is a modern fixation, and that final shape may not have been what was important for the people who bound their child's head.

Torres, Hilda (Texas State University)**[335]***Lithic Attribute Analysis for Blydefontein Backed Blades and End Scrapers*

Attribute analyses are common in the field of archaeology for categorizing and analyzing artifacts. In this study, the Later Stone Age end scrapers and backed blades from Blydefontein Rock Shelter in South Africa undergo an attribute analysis using an objective attribute guide. The guide combines common terms from previous studies along with new terms for typology to provide an efficient attribute analysis of the Blydefontein backed blades and end scrapers. The guide divides variables of the artifacts into attributes to identify differences between lithics not commonly used when conducting a general typological analysis. These variables include tool type, blank type, blank shape, dorsal scar patterns, lateral trimming, platform type, raw material, measurements, dorsal surface cortex proportion, and color for both end scrapers and backed blades. End scrapers also include variables of lateral trimming side, ventral surface flaking, bit measurements, and bit morphology. The attribute analysis of the Blydefontein Rock Shelter lithic assemblage will aid in the selection of lithic artifacts to be studied through use-wear analysis by predetermining manufacture, use, and postdeposition attributes.

Torres, Jimena (Universidad de Magallanes; Cape Horn International Center [CHIC]), Ricardo Álvarez (Universidad Austral de Chile; CHIC), Jaime Ojeda (Universidad de Magallanes; CHIC), Flavia Morello Repetto (Universidad de Magallanes; CHIC) and Manuel San Román (Universidad de Magallanes; CHIC)

[158]*Fishing Weirs, Docks, and Cholchénes in the Patagonian-Fueguine Archipelago: Confluence of Different Maritime Cultures on the Coastal Edge*

The intertidal zone, as part of the coastal landscape, is the territory of transition between the terrestrial and marine environments. In the southern fjords (between Chiloé and Cape Horn), it is a space of social construction that reveals multiple culture-marine ecosystem relationships, based on the interaction between different cultural groups with strong links to the sea, such as indigenous nomads, chilotes, and huilliches, and currently artisanal fishermen, among many other actors. Over time, the intertidal zone has accumulated material features of the activities of these populations, such as fishing weirs, pirenes weirs, docks, and *cholchénes* (*vivideros*, or mollusk beds), among other uses, accounting for the economic and sociocultural strategies of these groups, but also of their worlds (ontological dimension) and what can and should be done in this space and the things that populate it (cosmogonic dimension). This research presents the results of the study of several structures found in different areas of the Fuegian and northern Patagonian archipelago, from an archaeological and ethnographic perspective, respectively. The study allows us to discuss the wide knowledge and use of the geographical space of this vast region, considering the continuity of cultural practices throughout time.

Torres, Jimena [174] see San Roman, Manuel

Torres, Josh (National Park Service)**[40]***Discussant*

Torres, Narciso [202] see Fedick, Scott

Torres Morales, Genesis (University of California, Riverside), Celeste Marie Gagnon (Wagner College) and Feren Castillo (Universidad Nacional de Trujillo)

[53]*Embodied Lives: Bioarchaeology of the Moche Valley Chimú*

During the late 1970s to early 2000s archaeologists studying the Chimú of the northern coast of Peru created a foundation in the archaeological literature. This research helped us understand Chimú chronology, general functionality of the empire, and technological advancements made by the society. While these contributions to the Chimú literature are fundamental, a bioarchaeological investigation provides researchers with a more nuanced understanding of the lived experiences of people during the Chimú reign. The Chimú cemetery excavated at the Huacas de Moche site outside of Trujillo, Peru, is one of the largest samples of non-sacrificed individuals available for study. We analyzed 126 individuals who were interred in Plaza I of the Huaca de la Luna archaeological complex. We provide an analysis of the mortuary practices, demographics, and overall health of the Chimú individuals buried in Plaza I terraces 1 and 2.

Torres Porras, Alicia, Leobardo Pacheco Arias (Instituto Nacional de Antropología e Historia) and Jesús Sánchez Jacobo

[254]

Creating Ties: Co-responsibility between Government and Community for the Safeguarding of the Prehistoric Caves in the Central Valleys of Oaxaca, a World Heritage Site in Mexico

During the last four years, in the UNESCO World Heritage Site Prehistoric Caves in the Central Valleys of Oaxaca, effective relationships have been strengthened and created between the ejido commissary and the cultural managers of the National Institute of Anthropology and History (INAH). Through constructive dialogue, knowledge sharing, and joint actions with other governmental instances, the collaboration offered a better way to guard the site despite external limitations, thanks to inclusive spaces and the support the community and the institute find between them. The feeling of pride, belonging, and co-responsibility led to an archaeological project, national exhibition fairs, and cultural diffusion of the area where local worldviews, norms, and values were the base for co-creation processes. The union built has the potential to advance so that diverse cultural expressions can flourish and add to the protection and safeguarding of the World Heritage Site.

Torrice-Ávila, Elizabeth (Universidad de Atacama.)

[134]

The Linguistic-Epistemic Uprising behind the Teaching of the Atacamenean Language

This paper examines the insurgent practices of the people of Atacama who seek to teach Ckunza, a language that is extinct according to experts and the Chilean state. The Atacameños created the academy of the Ckunza language and teach the language in the community. Thus, they revive Ckunza, decolonizing the episteme imposed by the neoliberal state and taking up their linguistic and educational self-regulation. Finally, they are recovering ancestral knowledge through Indigenous research and legitimizing the representation of identity through their language (research funded by FONDECYT N. 11220225).

Torvinen, Andrea (Florida Museum of Natural History)

[287]

Chair

Torvinen, Andrea (Florida Museum of Natural History), Christopher Nicholson (Arizona State University), Ben Nelson (Arizona State University) and Christopher Schwartz (Environmental Planning Group, a Terracon Company)

[305]

Creating a Digital Reference Collection for the La Quemada-Malpasos Valley Archaeological Project

A long-running project in West Mexico, the La Quemada-Malpasos Valley Archaeological Project (LQ-MVAP), has entered the final stage of the data life cycle with a shift from long-term curation and analysis of the physical materials to an open-access digital archive with training guides for data reuse by future researchers. In this paper, we describe our NEH-funded collaboration with the Digital Archaeological Record (tDAR) to create the LQ-MVAP Digital Reference Collection (DRC), which will allow users to search images, attribute

data, reports, and field notes for information about specific artifact classes, chronological periods, or intrasite locations, as well as explore queries designed around project themes such as human-environmental interactions, craft production, exchange, and ritual practice. We also discuss the varied ethical considerations that arise from the digital curation of a multi-decadal and international project, as there are constraints to be addressed regarding the authority to control and disseminate online datasets and images. A bilingual web portal for the LQ-MVAP DRC will provide digital enhancements for a forthcoming edited volume and educational resources for all ages to engage the public in a dialog about this important archaeological site and its significance to local and descendant communities in Mexico and around the world.

Torvinen, Andrea [287] see Rutkoski, Ashley

Totsch, Jessica (University of Missouri)
[275]

Pompeii's Pitfalls: The Vulnerability of Water Supply in the Wake of Natural Disasters

The Roman water-supply system of Pompeii, Italy, has provided numerous insights into resource management and urbanization in the ancient Mediterranean world. It also provides a unique parallel for understanding the impacts of climate change and natural disasters on urban infrastructure today and in the past. Prior to the eruption of Mount Vesuvius in 79 CE, a series of earthquakes caused significant damage to Pompeii, Herculaneum, and nearby towns. As evidenced at Pompeii, this damage greatly impacted the water-supply system, requiring repairs and necessitating changes to the distribution of water at the site. This paper synthesizes the current research on Pompeii's aqueduct-fed system focusing specifically on the advantages and pitfalls of Pompeii's approach to dealing with interruptions in water supply and damaged infrastructure that resulted from a series of natural disasters in the Bay of Naples region from 62 to 63 CE.

Totsch, Jessica [107] see Johnson, Amber

Tourtellotte, Perry [17] see Chang, Claudia

Toyne, Jennifer Marla (University of Central Florida), Armando Anzellini (Lehigh University), Miquel Pans (Universitat de València), Josep Ribera Torró (Panograma Labs, Amazonas, Peru) and Esteve Ribera Torró (Panograma Labs, Amazonas, Peru)
[185]

Accessing the Inaccessible: Late Intermediate Period Chachapoya Collective Mortuary Practices at Diablo Wasi, Peru

The complexity in mortuary traditions across the Chachapoyas region ranges from single individual interments to large, commingled mortuary caves, as well as including constructed sarcophagi and shared open chambers high on cliff faces. Variation within sites and across funerary complexes demonstrates individuality in construction and may reflect not only markers of identity but specific ideological purposes. Explorations at Diablo Wasi using vertical rope access techniques allow us to characterize the variation at this site and nearby La Petaca. While constructed masonry chambers are found on the lower, easy-to-access base, other platforms and chambers are built on narrow ledges located in the center of the escarpment. Unique to Diablo Wasi are the masonry-enclosed natural grottos with more elaborately designed decorations around the entrances. The selection of natural small caverns parallels larger cave systems, but the added façade encloses them in a similar fashion to open sepulchers. Due to challenges in accessibility, these vertical sites have been less damaged by taphonomic processes and retain more materials for analysis. These mortuary contexts present significant challenges in accessibility, both during construction and use, but also for archaeological practice. These raise questions about the nature of risk associated with interring the dead and Chachapoya eschatology.

Toyne, Jennifer Marla [211] see Anzellini, Armando

Trabanino, Felipe [128] see Arroyo, Barbara

Trabert, Sarah [260] see Bethke, Brandi

Trachman, Rissa (Elon University)
[213]

Cultural Collaborations among Ritual, Economy, and Social Organization: Recent Investigations at the Site of Dos Hombres, Belize

Evidence from the site of Dos Hombres in northwestern Belize is presented from multiple contexts revealing the cultural collaborations with ritual, economic, and social expression/s as they are manifest in and necessarily tied to material aspects of everyday life. Ongoing previous research has been concerned within the northern plaza, a space of public activity. Essential to the understanding of economic activity at the site, however, necessarily involves the identification and analysis of possible market locales within the site which includes all three plazas and/or the liminal spaces between them. These recent studies were conducted through an NSF grant. Although analysis is ongoing from the recent NSF data collection, preliminary data, architectural construction sequences, activity residues, and ritual and economic deposits collectively reveal much about the ancient city specifically the interconnected nature of important aspects of daily life, public and private activities of economic, religious, and social significance. Material culture associated highlights the interwoven nature of ritual with economic production, social activity, and commerce and the importance of cultural collaborations among them. The extent of market based economic activity and its integration with ritual and social expression are critical perspectives in understanding the nature of ancient Maya life at Dos Hombres.

Tran, Jenna [6] see Weber, June

Tran, Justin (University of California, Riverside) and Anabel Ford (University of California, Santa Barbara)
[172]

Meeting Needs in the Ancient Maya Forest: A Model of Food and Shelter at El Pilar

Maya land-use strategies, based on traditional agricultural methods documented by the Spanish conquerors and oppressed during the colonial period, have demonstrated a staunch resilience into the modern age. The milpa forest garden cycle demonstrates dynamic regeneration via an asynchronous cycling of open fields with annual crops, perennial succession providing domestic products, and mature forests for fruits and construction materials such as thatch and wood framing. This poster outlines our method of using spatial analysis techniques, remote-sensing data, and traditional ecological knowledge from living Maya forest gardeners to identify areas suitable for traditional practices. Using settlement data and Lidar to quantify slope thresholds for milpa cycle agriculture, and identifying mature and managed forests, we examine the landscape of El Pilar under a lens of product fulfillment. We estimate the food and shelter needs of an ancient Maya population using agricultural productivity data and required materials for house construction as outlined by Maya forest gardeners. In turn, we investigate the potential of the land at El Pilar to provide the necessary resources for life in this tropical environment. The results guide a discussion of the sustainability and sufficiency of the milpa forest garden cycle within the Maya forest.

Travaglino, Luigi [203] see Edgcomb, Owen

Trebouet, Florian (Northern Arizona University)**[181]***Discussant***Trejo, Claudia (INAH Mexico)****[152]***Chemical Analyses of Activity Areas at Cueva de las Varillas in Teotihuacan*

We present the chemical analysis of human activities in a cave occupied during the Epiclassic and Postclassic periods (AD 600–1500) at Teotihuacan. The archaeological context is formed by different cultural occupations within the same space, but during different periods of time. Due to the cultural and temporal diversity, we implemented a methodology based on the 3D association of the data through a digital model. With this procedure, a total of 11 superimposed occupations were detected, three from the Aztec period, two from the Mazapa, and six from the Coyotlatelco. A total of 395 samples were analyzed to establish phosphate, carbonate, and pH values of each activity area excavated. The results define the types of activities and the use of space in each occupation, while differentiating the activities carried out in each chamber of the cave. It was observed that in all occupations, both daily and ritual activities were carried out. To corroborate the results, the chemical data were contrasted with general data from the associated lithic and ceramic materials. This made it possible to integrate the results within a broader interdisciplinary project and promote the generation of more precise explanations about the use of these caves in prehispanic times.

Tremain, Cara [226] see McLellan, Alec

Trepal, Dan (Michigan Technological University)**[62]***The Hamtramck Historic Spatial Archaeology Project: Integrating Archaeological Collections into Historical Spatial Data Infrastructures*

The Hamtramck Historic Spatial Archaeology Project, launched in 2021, is an active digital, web-based, public, collaborative deep-mapping project for the city of Hamtramck, an industrialized city completely surrounded by Detroit. The primary focus of the project is to create and launch a digital, web-based, publicly accessible deep map linking information from written records and historic maps with archaeologically recovered objects or building remains associated with the same location. This paper describes our recently launched deep map (www.mappinghamtramck.com) and the ways a public, urban archaeology project can make more effective use of the interplay between the historical and archaeological records and also better collaborate with heritage-making efforts on the part of the community. Finally, we present our project as a model that can be replicated in other urban communities through partnerships between universities and local heritage organizations.

Trever, Lisa (Columbia University)**[208]***Discussant***[13]***Chair*

Trever, Lisa (Columbia University), Hugo Ikehara Tsukayama (Metropolitan Museum of Art), Jessica Ortiz Zevallos (PIA Paisajes Arqueológicos de Pañamarca), Michele Koons (Denver Museum of Nature & Science) and Jose Ochatoma Cabrera (PIA Paisajes Arqueológicos de Pañamarca)

[13]*Pañamarca through Time: Before, during, and after Moche*

Although it is now best known for earthen architecture bearing iconic wall paintings in late Moche style (ca. 600–850 CE), Pañamarca was a monumental center of great importance in the lower Nepeña Valley of north-coastal Peru from at least 150 BCE through the 1400s CE. In this paper, we present the evidence for this expanded understanding of the site's history and its monumental transformations and reconfigurations—from the Final Formative period until the eve of Spanish colonization—including data from stratigraphic excavations and dozens of new AMS dates. This diachronic view of Pañamarca has important implications for local and regional archaeology, as well as for enduring relationships between the site and its neighboring contemporary community of Capellanía.

Trever, Lisa [13] see Ikehara Tsukayama, Hugo

Trever, Lisa [13] see Ortiz Zevallos, Jessica

Triadan, Daniela (University of Arizona) and Takeshi Inomata (University of Arizona)
[125]

Aguada Fénix and the Middle Usumacinta Region: Interregional Interactions and Social Transformations in the Middle Preclassic Period

The recently discovered site of Aguada Fenix in eastern Tabasco, Mexico, is one of the largest monumental constructions in Mesoamerica. It was built in a standardized architectural pattern that we call the Middle Formative Usumacinta Pattern (MFU). Its earliest construction phases date to the beginning of the early Middle Preclassic, around 1100 BC. This complex represents an altered landscape of a scale and complexity that was previously unknown for Mesoamerica. The overall layout of the ceremonial space clearly represents a vision of the cosmology of the people at that time. Remarkably, this cosmology, exemplified in this very standardized pattern, was not only present in the Middle Usumacinta drainage, but it was shared over a very large region from the Usumacinta Basin to western Veracruz. So far, we have identified 478 of these formalized complexes along the Mexican Gulf Coast. The widespread use of the MFU shows extensive interregional interactions during the early Middle Preclassic among people that were probably of different ethnic groups and spoke different languages. These new discoveries and data lead to new insights into the processes involved in the formation of Maya civilization and other early Gulf Coast groups.

Triadan, Daniela [125] see García Hernández, Melina

Triadan, Daniela [285] see MacLellan, Jessica

Triadan, Daniela [125] see Mendez Bauer, Maria Belen

Triadan, Daniela [125] see Pinzón, Flory

Triantaphyllou, Sevasti [113] see Ogawa, Timothée

Tribbett, Madeline [201] see Hermsmeyer, Isabel

Tripoli, Simone and Nam Kim (University of Wisconsin, Madison)
[98]

A Dong Son Community: Connecting Communities through a Shared Bronze Tradition

The Dong Son culture (ca. 700 BCE–AD 200), at its simplest, is a collection of a group of sites and artifacts that are characteristic of a particular group or region in northern Vietnam. Their most defining characteristics are their burial practices (i.e., the boat coffins) and their sophisticated bronze tradition seen from artifacts like weapons (e.g., swords/daggers, spears, crossbows, etc.) and prestige goods (e.g., bronze drums, thap, etc.). The presence of these shared practices, specifically the bronze tradition, suggests a community of craftspeople that regularly interacted and shared knowledge to develop their craft; otherwise known as a community of practice. This poster will focus on the way the production of these bronze artifacts can impart social meaning within the Dong Son community, and how that social meaning can be distributed and

eventually shared; thus, creating a Dong Son community of practice. By exploring a Dong Son community of practice through the production of bronze artifacts, this research could provide insight in understanding how craft production can influence the relationship between intra-regional and possibly even interregional communities.

Tritsaroli, Paraskevi [241] see Hannigan, Elizabeth

Tritsaroli, Paraskevi [241] see Hayes, Leigh

Tritsaroli, Paraskevi [241] see Rothwell, Jessica

Trivedi, Mudit (Stanford University)

[86]

A New Paradigm for South Asian Glasses: Mineral Soda Alumina Revisited

The Elemental Analysis Facility at the Field Museum has been at the forefront of global research into distinctive South Asian glasses, technically termed “Mineral Soda Alumina” glasses. In celebration of 20 years of field-defining research, this paper presents the results of a major review of m-Na-Al glasses the author has conducted in collaboration with Laure Dussubieux. This paper presents the new paradigm and classificatory method for defining and understanding compositional groups in m-Na-Al glasses, and it will demo a new software platform designed to make such analysis easier to conduct. It will present new paradigm-changing results from North India, based on results from the site of Indor, excavated by the author, regarding what they reveal about cross-craft currents of glass supply and exchange both within and outside South Asia. Finally, this paper presents a review of in-group variation and reviews its promise for specifying particular exchange networks from South Asia to the Swahili coast, mainland and island Southeast Asia, and toward the Levant and Europe.

Troccoli, Ruth (DC State Historic Preservation Office) and Christine Ames (DC State Historic Preservation Office)

[98]

Collections Rescue in Washington, DC: “Can we have our garage back?”

“Can we have our garage back?” The person asking this was storing 50 boxes of collections from data recovery at the 1786 Forrest Marbury House in her garage. Compliance investigations in 1986 were not reported because of a legal loophole, and curation was not funded. DC lacked a curation facility so many of our collections were parked with whoever could be convinced to house them, including developers. After 35 years, we have a curation facility and this legacy collection now has a permanent home, but it remains unreported. Locating and rescuing legacy collections requires doing the archaeology of archaeology. Legacy collections that lack technical reports are appealing to researchers and graduate students looking for collections-based data for papers, theses, and dissertations. Most collections in search of authors were professionally excavated with extant field records, and photo catalogues. Collaboration with young researchers is mutually beneficial. They apply current/contemporary analytical frameworks and methods to create new data, approaching questions of class, ethnicity, heritage, gender, and occupation in ways unapproachable in the 1980s–1990s. They learn collections management best practices, and we receive inventoried, analyzed, curation-ready collections; technical reports; and all the data. We showcase several examples herein including some in need of authors.

Trombley, Tim [13] see Ochatoma Cabrera, Jose

Trottier, Marie [202] see Lamothe, Francis

Trubitt, Mary Beth (Arkansas Archeological Survey)**[176]***Continuity and Change in Contact Period Caddo Communities in the Ouachita Mountains*

For ancestral Caddos living in the Ouachita Mountains of west-central Arkansas, the two centuries between AD 1450 and 1650 saw both continuity and change. An extended period of drought in the 1450s and contact with outsiders beginning with the Spanish in 1541 would have stressed local farming communities. Responses may have included increasing interactions with neighboring communities within the region that preceded seventeenth-century relocations. Excavations at a village site in the upper Ouachita River valley gave an opportunity to examine persistence, responses, and changes. In particular, two large refuse pits excavated in domestic areas of the site—one dating to 1500 and the other to 1650—provide a wealth of data about material culture, foodways, and chronology. These are key contexts for the definition of a new archaeological phase in the Ouachita Mountains and interpretations about the history of ancestral Caddo communities that lived there.

Trudeau, Melissa [68] see Giblin, Julia

Trujillo, Judith (Universidad de Los Andes, Researcher Gipri Colombia) and Sonia Archila Montanez (Los Andes University)**[112]***Rock Art Landscapes: Identification of Rock Art Distribution Patterns at Different Spatial Scales in La Lindosa, Guaviare, Colombia*

This presentation shows an initial approach to rock art landscapes in Nuevo Tolima, Serranía of La Lindosa, based on a systematic study of rock paintings. The analysis supposes that multiple human activities left traces currently visible in the rock art landscapes derived from that human agency. These traces can be observed, for example, in the quantity and distribution of motifs on the bedrock, the frequency and variety of motifs on the rockshelters, the size of each of the painted murals, among others. To realize this spatial experience, it is considered important that the observer perceives the rock landscape at different scales, sees each mural as a whole, and in turn as a part of the mountain range. By moving through the tepui to visit the rock murals and observe the particularities of each of the painted murals, certain patterns of their distribution and production can be identified.

Trujillo-Hassan, Daniela, Julie Wesp (North Carolina State University), Sebastián Rivas (System of Culture, Art and Heritage Center) and Ethan Hyland (North Carolina State University)**[201]***Dietary Practices of the Muisca at Nueva Esperanza Archaeological Site during the Late Muisca Period (AD 1000–1600)*

This study analyzes the impact of environmental stressors on dietary practices within the Muisca society at the Nueva Esperanza archaeological site in the Cundiboyacense highlands during the Late Muisca period (AD 1000–1600). This coincides with climatic changes associated with the beginning of the period known as the Little Ice Age, which was a general cooling of the environment that impacted food production around the world. This research combines analysis of stable isotopes ($\delta^{15}\text{N}$, $\delta^{13}\text{C}$), phytoliths in dental calculus, and identification of skeletal pathologies associated with nutrition to examine the effects of these climatic changes and cultural responses to the reduction in food resources. We analyzed individuals from two different occupations during the Late Muisca period; cut 4 ($n = 13$, radiocarbon dated to AD 1024–1155) and cut 13 ($n = 22$, radiocarbon dated to AD 1429–1522). The results suggest that while this is a hierarchical group, their distribution of resources was more egalitarian than other chiefdoms.

Tsai, Che-Hsien (National Taiwan University)**[315]***Unraveling Neolithic Cultures in the Taipei Basin through Pottery Technology at Tzufakung*

The Taipei Basin holds archaeological significance, particularly in illuminating the Neolithic era in Taiwan. The sites of Yuanshan and Botanical Garden each represent distinct Neolithic cultural phases. However, the coexistence, contemporaneity, or transition between Neolithic cultures has been a subject of debate. The nationwide site survey, commissioned by the Ministry of the Interior, unveiled extensive sites across the Taipei Basin. Unfortunately, due to a lack of excavation, most materials gathered lack well-defined contexts. The Tzufakung site, strategically positioned between the Yuanshan and Botanical Garden sites, assumes particular importance in elucidating the relationship between these two distinctive cultures. The extensive surface collections encompass pottery sherds from both cultures, rendering it an ideal case study. This research employs typology, thin-section petrography, X-ray fluorescence (XRF), and scanning electron microscopy (SEM) to examine pottery technology at Tzufakung. Its primary objectives are identifying the origin of pottery, and characterizing production techniques to shed light on interaction and cultural influences. The results explore the potential of pottery and its production to address enduring debates among Neolithic cultures and lay the groundwork for the application of scientific methodologies to other uncontexted pottery to enrich our understanding of technological development and cultural exchanges during this period.

Tsang, Cheng-Hwa [86] see Wang, Kuan-Wen

Tsang, Roxanne (University of Papua New Guinea)**[263]***Chair***Tsang, Roxanne (University of Papua New Guinea)****[263]***Rock Art As Place-Making Strategy: A Papua New Guinea Case Study*

Rock art and its ethnographic study provide important insights to understand people's connection to place. In this research, formal and informed methods were used to analyze four stenciled rock art sites in Auwim village, East Sepik Province, Papua New Guinea (PNG). One thousand and seventy-seven rock art motifs were identified while the ethnographic data results show that Auwim people's use of rock art production and its role through time has changed from ritual functions to mundane activities of place-marking. The variation in the subject matter of rock art production, the two to three layers of production and the tentative four-phase sequence model also show change in people's choice from using human appendage design forms to the stenciling of significant long-distance trade and exchange goods and local weapons, and then the stenciling of European-introduced tools. The results of the rock art motif analysis also show links to other existing archaeological sites and objects of significance, revealing regional links with the Austronesian Painting Tradition model in PNG and the broader Indo-Pacific region. This suggests that Auwim rock art could have been made over a long time, but its production continues today.

Tserendagva, Yadmaa [23] see Rosen, Arlene

Tsakamoto, Kenichiro (University of California, Riverside), Octavio Esparza Olguín (Universidad Nacional Autónoma de México), Daniel Salazar Lama (Archéologie des Amériques), Luz Evelia Campaña Valenzuela (Independent Researcher) and Adriana Velázquez Morlet (Centro INAH Campeche)

[32]*Early Monuments at the Maya Archaeological site of El Palmar, Campeche, Mexico*

El Palmar has garnered considerable attention from researchers, primarily due to its numerous carved monuments. In 1936, Sir Eric Thompson's exploration initially reported 44 stelae and several altars at its Main Group. However, despite sporadic studies conducted by Tatiana Proskouriakoff and others in subsequent decades, systematic research was lacking, impeding a holistic understanding of the significance of those monuments in ancient Maya society. This paper centers on the three earliest monuments found at El Palmar. Our epigraphic and iconographic analyses of these early monuments provide new insights into Maya dynastic history. Since 2007, the El Palmar Archaeological Project has relocated or newly recorded 38 stelae, 16 altars, a panel, and a hieroglyphic stairway. The studies of Stela 46 suggest that the El Palmar dual-royal titles, *sakho'ok wak piit ajaw*, can be traced back to at least 125 CE. Stela 20, erected in 514 CE (9.4.0.0.0), documents that the seventeenth successive ruler stood as *k'uhul ibil*, "holy bean," an enigmatic title possibly linked to regional political authority. We conclude that the El Palmar dynasty managed to endure a sociopolitical crisis that unfolded during the Protoclassic period.

Tsukamoto, Kenichiro (University of California, Riverside)

[74]

Discussant

Tsukamoto, Kenichiro [320] see López Camacho, Javier

Tsukamoto, Kenichiro [164] see Sullivan, Kelsey

Tucker, Bram (University of Georgia)

[219]

The Legacy of the Foraging Spectrum and Mikea Ethnography: Do We Need Hunter-Gatherer Studies Anymore?

One way to view the twentieth-century history of hunter-gatherer studies is as a long attempt to evaluate Victorian notions of foragers as primitive relics with actual data from real foraging peoples. This history came to a fiery climax during the Kalahari history debate of the 1990s, when researchers argued whether hunter-gatherers represent a special type reflective of past lifeways or whether they are oppressed rural proletariat like other peasants. Robert Kelly's Foraging Spectrum offered a third road, one based on empirical data documenting the diversity of hunter-gatherer experiences; and Mikea people walk this road, conforming to and confounding forager stereotypes. Accepting that "foragers" are a diverse bunch, does it make sense to keep the category and continue to devote special study to it? I offer a cautious yes. First because past lessons haven't been learned, and scholars continue to offer homogenized primitives, in other clothes. Second, because the political history of treating some people as hunter-gatherers has made them so. Third, because contemporary and historical foraging activities continue to teach us about human-environment interactions. One legacy of the Foraging Spectrum is a spectrum of new research trajectories.

**Tucker, Carrie (University of Central Florida), Jeffrey Glover (Georgia State University),
Dominique Rissolo (University of California, San Diego) and Michael Callaghan (University of
Central Florida)**

[276]

The Ceramic Chronology of Vista Alegre: An Updated Typological Assessment

The ceramic sequence developed for Vista Alegre, a Maya port site on the northern coast of Quintana Roo, Mexico, demonstrates both the site's persistence through time and its extensive trade relationships across the Maya world. The Proyecto Costa Escondida (PCE) team has synthesized an official site chronology from an ongoing analysis of the ceramic materials, revising Vista Alegre's site history into six ceramic complexes. The earliest Middle Preclassic materials link Vista Alegre to the Gulf Coast and Belize, and the ceramics from subsequent time periods continually expanded this initial geographic range. Vista Alegre's ceramic collection shows ceramic affiliation with various large city centers over time, though without direct external control. The northern Maya Lowland regional trends of Terminal Preclassic incised bichromes and Late Classic slatewares are strongly represented, as well as smaller amounts of southern Lowland-produced ceramic types starting in the Early Classic period. The number of ceramic types found to date shows a remarkable variety as

compared to the nearest inland sites and regional city centers. Vista Alegre's ceramic diversity and volume are indicative of a well-connected, long-lived, and resilient trading port, and its ceramic collection continues to enhance our understanding of ancient Maya maritime exchange.

Tucker, Jia (University of Pittsburgh) and Jennifer Muller (University of Pittsburgh)

[209]

Integration of Resilient Bodies in Pathological Narratives around Disability

Bioarchaeology's epistemological history is closely tied to that of paleopathology and medicine. Accounts of disease, injury, and death in the archaeological record are steeped in the medicalization of the body and of corporeal difference as defective and, therefore, requiring correction by practitioners and/or accommodation by caregivers. A series of osteobiographies from historic US institutions (e.g., Erie County Poorhouse, Buffalo, New York) are presented with their contextually rich documentary and archaeological archives. These case studies critically evaluate the potential for socially perceived corporeal difference, its historical assignment as impairment, and the function of this social, and often political, evaluation. Rather than seeking to establish social accommodation, or a lack thereof, these analyses center the ingenuity, resilience, and social negotiations of the individuals whose skeletons present with corporeal difference (e.g., pathologies, trauma) as perceived through the bio/archaeologist's lens. They counter the notion of disability (a disadvantageous physical or mental condition that limits a person's activities), sometimes in spite of disablement (social prevention of individuals to full participation in society). The inclusion of a social disability framework in bio/archaeology avoids the exclusion of individual experience with perceived pathology and presents a more historical narrative of corporeal difference in the past.

Tudor Elliott, Evan (Chronical Heritage)

[108]

Gendered Grave Goods: Relationships between Gender-Associated Artifacts and Biological Sex in the Precontact San Francisco Bay Area

Too often the identified biological sex of precontact human remains are assumed to represent the lived gender experience of the individual. At the same time, concepts of the gendered division of labor influence the association of classes of artifacts with genders. This paper reexamines data from excavations of burials in the San Francisco Bay Area conducted in consultation with members of the descendant communities designated as the Most Likely Descendant by the California Native American Heritage Commission. Using that existing data and framing it with ethnohistorical information, this paper investigates the relationship between osteologically estimated sex of individuals and artifacts traditionally associated with gender that were placed with burials as grave goods. These relationships are then used to examine how archaeologists interact with human remains and interpret the lives of past people. Specifically, portable mortars, pestles, bone awls, and projectile points and their occurrence with the burials of osteologically estimated male and female adults and children is analyzed and compared with ethnographic and ethnohistoric data. This research was undertaken without any direct analysis of human remains or artifacts, all of which were repatriated and reinterned. Members of descendant communities were consulted about appropriate use and approved access to the data.

Tudor Elliott, Jessica

[4]

Living with Floods: The Intersection of Past and Present Flood Management

Through the Levee Safety Program (Program), the United States Army Corps of Engineers partners with levee sponsors to manage more than 1,600 levees across the United States that help reduce flood risk to people, businesses, critical infrastructure and the environment. Implementation of projects under this Program must take into consideration several historic and precontact levees or mounds that are preserved within modern levees. This paper seeks to inform the community of practice of this phenomenon, and to better prepare CRM practitioners for the presence of precontact and historic deposits within and adjacent to public levee prisms.

Tumberg, Timothy**[297]***Rethinking “Hell’s Four Acres”: Consumerism at Whiskey Row*

The historic town-site of Agate Bay, on the north shore of Lake Superior in present-day Two Harbors, was developed in the 1880s in conjunction with and as a consequence of the opening of Minnesota’s first (Vermilion) Iron Range. Popular historic accounts claim that Agate Bay was a rough-and-tumble frontier settlement that became commonly known as “Hell’s Four Acres,” with an especially notorious section called Whiskey Row. Other research suggests that this wild reputation was a myth perpetuated by Minnesota Iron Company in order to leverage a buyout of prime waterfront real estate. Though occupied for only a short time, Agate Bay is a textbook example of archaeological potential because much of the platted town-site was capped by a wood platform shortly after its abandonment in the late 1880s, then by a large concrete coal storage slab from the late 1920s until October 2006, effectively sealing the site as a time capsule.

Archaeological investigations resulted in the recovery of more than 40,000 artifacts, which enabled focus on consumerism as a means of separating myth from reality and indicates a that reconsideration of the reputation of “Hell’s Four Acres” is in order.

Tumelaire, Jacob (IAC, LLC) and Audrey Waterman (IAC, LLC)**[224]***High above the River: Points, Pottery, and a Pithouse in Southern New Hampshire*

This paper presents the results of a targeted data recovery conducted at the Amoskeag West Bank site (27-HB-079) in Manchester, New Hampshire. First identified in 1933, a 2022 archaeological investigation established that the site encompasses a large but as-yet-undefined Native American cultural resource in the heart of New Hampshire’s largest city. IAC’s 2023 data recovery yielded valuable data about the site, confirming the presence of high-integrity cultural deposits from multiple eras of the precontact period, including evidence for a Paleoindian component. Archaeologists collected diagnostic lithic and ceramic artifacts and documented numerous cultural features, highlighted by a pithouse rare in the regional archaeological record. This presentation provides a summary of this significant Native American cultural resource and the major questions yet to be answered.

Tun Ayora, Gabriel [261] see Ringle, William

Tune, Jesse (University of Mississippi) and Sonya McGuire**[20]***Early Forager Responses to Ecological Changes in Southeastern North America*

The timing and process of initial human colonization of the Americas has been at the forefront of archaeological inquiry for more than a century. Today we have moved beyond simply asking “when?” and “from where?” did the first Americans arrive and are now able to investigate more nuanced questions about what life was like for those early foragers. The research presented here combines lithic analysis with large spatial datasets to investigate the settling in processes associated with some of the first foragers in southeastern North America. Southeastern foragers responded to ecological changes and possibly social pressures during the Pleistocene-Holocene transition by modifying their landscape-use strategies to map onto a restructured resource base. Landscape use patterns shifted from being centered around aggregation sites during the Late Pleistocene to being focused on site communities during the Early Holocene as foragers were settling into smaller territories.

Tune, Jesse [253] see Miller, D. Shane

Tung, Tiffany [281] see Dalton, Jordan

Tung, Tiffany [243] see Heaney, Christopher

Tung, Tiffany [246] see Krause, Maya
 Tung, Tiffany [34] see Locker, Angelina
 Tung Tiffany [70] see McCormack, Katie

Turley, Samantha (Vanderbilt University)

[223]

Chair

Turley, Samantha (Vanderbilt University) and Steven Wernke (Vanderbilt University)

[223]

Digital and Computational Methodologies for Masonry Typologies: A Quantitative Approach to Structure Classification in the Colca Valley, Peru

Archaeologists have long used architectural energetics to better understand the relationships between labor organization, political power, and materiality in premodern societies. The sixteenth-century Spanish invasion of the Andes caused unprecedented societal upheaval and, in the 1580s, the physical upheaval of people as the Toledan *reducción* system resettled communities into concentrated towns. It remains largely unclear how architectural production practices changed throughout this period despite scholastic attention to architecture features and building forms overall. Addressing production practices requires detailed regional masonry typologies such that labor-time estimates for sites and for individual structures can be calculated and compared. This study aims to systematize masonry typologies through the quantification of masonry features in the Colca Valley of southern Peru. It builds on existing descriptive research by utilizing photogrammetric and 3D models of various building types to extract wall feature data at 10 sites. Using metric features including stone sizes and counts per surface area, rectangularity, gap area, and angularity allows for more systematized identification of masonry types, especially in areas where unevenly coursed walls are common and complicate qualitative characterizations. Ultimately, a more robust typology will allow the authors to generate more nuanced energetics estimates across a variety of sites and structures.

Turner, Andrew (Getty Research Institute)

[11]

Discussant

Turner, Andrew (Getty Research Institute)

[252]

Merchants, Mercenaries, and Migration in the Art of Cacaxtla (AD 600–900)

John Pohl's groundbreaking investigations of the tandem roles of merchant exchange, alliance building, and migration have caused us to reconceptualize the multiethnic sociopolitical landscapes of central Mexico and Oaxaca in the Epiclassic and Postclassic periods and the social actors that populated them. In the spirit of Pohl's work, this study reconsiders the nature of the central Mexican site of Cacaxtla, an Epiclassic fortified settlement with a mural tradition that makes overt stylistic, technical, and iconographic references to the art of the distant Maya lowlands. Though in particular Cacaxtla's so-called "Battle Mural" has generally been interpreted as a scene depicting the defeat of foreign Maya warriors at the hands of local central Mexicans, I argue that, contrarily, the mural vividly portrays the overthrow of local elites by a coalition of invading mercenaries wearing the trappings of Maya warfare. This foundational event laid the groundwork for the establishment of Cacaxtla as a foreign merchant colony that facilitated the movement of goods and people between central Mexico and the Maya Lowlands.

Turner, Bethany (Georgia State University)

[277]

Chair

Turner, Bethany (Georgia State University)**[277]***A Sacred Frontier? Inka Settlement at Salapunqu*

During the fourteenth–sixth centuries, the Inka Empire transformed Peru's Urubamba Valley, located in the piedmont foothills of the eastern Andes, into an integrated landscape that was both economically productive and spiritually sacred. Extensive surveys have identified a shift whereby the Inka appear to have relocated settlements at higher elevations to the valley floor, coinciding with dramatic agricultural expansion and the construction of royal estates. The extent to which the Inka built their sites atop older sites is less well known in this region, especially since documented sites in the piedmont prior to 1000 CE are sparse. This study presents new $^{87}\text{Sr}/^{86}\text{Sr}$ data from individuals ($N = 39$) interred at the Inka site of Salapunqu, considered an administrative outpost and symbolic gateway to Machu Picchu. Tooth enamel $^{87}\text{Sr}/^{86}\text{Sr}$ varies widely, including values as high as 0.73032. These high values suggest some individuals spent their early lives in the Cambrian-Ordovician zone further north and east, approaching the Amazon region. Moreover, preliminary AMS dates for the study sample span two millennia, indicating the possibility that a known, much older site in the Urubamba Valley, with ties to the Amazonian foothills, was co-opted by the Inka when they built Salapunqu.

Turner, Michelle (Mystic Seaport Museum), Kellam Throgmorton (Northern Arizona University) and Jeffrey Ferguson (University of Missouri)**[335]***The Social Significance of Jemez Mountains Obsidian at Aztec Ruins National Monument*

Studying the sources of obsidian in the American Southwest has provided valuable insights into both resource procurement and the social and political processes that underlie it. We report on a large sourcing study from Aztec Ruins National Monument, a Chacoan community significant both for its political history and for its multiple great houses. Archaeological testing at the Aztec North great house, occupied for a short period between about 1070 CE and 1140 CE, revealed large quantities of obsidian debitage, with few formal tools, sourced entirely to two obsidian sources in the Jemez Mountains. At the Aztec West great house, occupied for nearly two centuries spanning the Chacoan and post-Chacoan periods, preliminary research also suggests the presence of large quantities of Jemez obsidian. In light of recent research on obsidian at Chaco Canyon and in the Rio Grande, we consider how obsidian use and exchange at Aztec compare to other regions. We also address the social significance of these patterns, including networks of relationships that brought obsidian to Aztec and the possible roles of color symbolism and ideological connections to distant sacred landscapes.

Turney, Kathryn (Tetra Tech Inc. Verde Valley Archaeology Center), Jonathan Schaefer (Tetra Tech Inc.), Aliceia Schubert (Tetra Tech Inc.), Deborah Huntley (Tetra Tech Inc.) and Haley Wilkerson (Tetra Tech Inc.)**[269]***Cultural Landscapes of the Red Rocks: Southern Sinagua Occupations in the Oak Creek-Sedona Region of Central Arizona*

Recent pedestrian survey in the Oak Creek-Sedona region of Central Arizona executed as part of the Red Rocks Trail Restoration Project has identified a substantial number of Formative period sites belonging to the Southern Sinagua Tradition. Represented are habitation, agricultural, resource procurement, ritual/ceremonial, and special activity sites. Landscape archaeology emphasizes the intrinsic yet often overlooked connection between humans and their environment. Here we examine the interplay between the natural and anthropogenic and how the unique natural environment and terrain of the Oak Creek-Sedona region affected and was thus affected by human behavior.

Turney, Kathryn [175] see Schaefer, Jonathan

Tushingham, Shannon (California Academy of Sciences)**[87]***Chair*

Tushingham, Shannon [87] see Carney, Molly

Tushingham, Shannon [87] see Fulkerson, Tiffany

Tushingham, Shannon [133] see Kingrey, Haden

Tutak, Danielle (University of Michigan), Kara Larson (University of Michigan) and Alicia Ventresca-Miller (University of Michigan)**[286]***Revisited Analysis of Early Bronze-Age Bone Tubes*

Comparative analyses have long helped archaeologists identify characteristics of artifacts including origins, social life, and use. However, this tool becomes problematic when broad conclusions are drawn without evidence beyond similar characteristics between types of artifacts. One example of this are Early Bronze Age bone tubes. Decorated bone tubes are found in many contemporaneous regions and cultures and archaeologists are generally able to compare tubes cross-regionally with each other, but this has led to overreaching assumptions about some artifacts' uses. Such is the case of Early Bronze Age Levantine bone tubes. Most Levantine bone tubes originate from a single workshop at Tell el-Hesi and these tubes are assumed to be pigment containers, as this is how similar bone tubes were used. Here, use-wear analysis and residue analysis of Levantine tubes along with an extensive literature review reconsiders established understanding of what these tubes were used to hold, and the workshop identified at Tell el-Hesi gives archaeologists an opportunity to compare a chronologically distinct set of Levantine bone tubes to those from other regions. Better understanding of these tubes' social lives allows better understanding of the cultures that used them.

Tuvshinjargal, Tumurbaatar [23] see Hart, Isaac

Tuvshinjargal, Tumurbaatar [151] see Windle, Morgan

Tuxá, Yacunã [134] see Balanzategui, Daniela

Tweet, Justin [329] see Rich, Megan

Twiss, Katheryn [36] see Iorga, Anastasia

Tydgadt, Lola (TraceoLab, University of Liège) and Veerle Rots (TraceoLab, University of Liège)**[58]***Getting a Handle on Form and Function: Functional Analysis of Aurignacian Formal Tools from Abri Pataud (Périgord, France)*

In Paleolithic Europe, the Aurignacian period marks the beginnings of the production of a multitude of formal tools, each with specific typologies that sometimes have been attributed to one or several functions and actions. Functional studies have shown that morphology does not suffice to infer use, and that one tool type can cover multiple functions. These studies enable us to perceive standardized tools differently by providing information about the materials with which they came into contact, the actions associated with their use, and the possible presence of hafting systems. Furthermore, they inform us about the life cycle of the tools and the investment they received, especially in terms of production, use intensity, and resharpening before

discard. Some morphotypes may also reveal traces unrelated to use that inform us about lithic production strategies. We address these various aspects by studying the microscopic traces present on a selection of nearly 300 formal tools (end scrapers, sidescrapers, burins, carinated pieces, Aurignacian blades) from Aurignacian layers 7, 8, and 11 of Abri Pataud (Périgord, France). This collection yielded hafting traces for some of the formal and functional categories and provides illustrations of rarely recorded production wear.

Tykot, Robert (University of South Florida), Nicoletta Violante (Università di Siena) and Gaia Mustone (Università di Siena)

[116]

Long-Distance Obsidian Trade from Multiple Island Sources to Prehistoric Tuscany, Italy

Obsidian tools and flakes are regularly found at prehistoric sites in Tuscany, indicating long-distance trade and distribution during the Neolithic through Bronze Age periods (ca. 6000–1000 BC). Some 436 artifacts from six archaeological sites in Florence, Siena, and Grosseto, some 300 km from the nearest geological obsidian source, were tested with a nondestructive portable X-ray fluorescence spectrometer. Calibrated trace element results for Rb, Sr, Y, Zr, and Nb were used to assign specific geological sources, while geological samples for the sources on Lipari, Palmarola, Sardinia, and other Mediterranean islands were analyzed with the same instrument. In this study, Sardinia accounts for more than 50% of the artifacts tested, Lipari nearly 30%, and Palmarola almost 20%. Most of the Lipari and Palmarola obsidian artifacts are from the Middle Neolithic sites of Spazzavento and Chiarentana, and most of the Sardinia obsidian artifacts are from the Late Neolithic site of Neto-Via Verga and two survey areas of the Maremma Regional Park. These data are compared with previous studies of 937 obsidian artifacts from many sites in Tuscany, along with their specific location, archaeological contexts, and cultural periods. The obsidian distribution patterns are used to propose potential transportation routes and changes over time.

Tykot, Robert [319] see Bonzani, Renee

Tykot, Robert [24] see Hays, Christopher

Tykot, Robert [68] see Huskey, Delphi

Tzib, Delmer [226] see Martinez, April

Tzib, Frank (Aj Tz'ib), John Walden (Harvard University), James Mesh (Oxmul Coffee), Christina Warinner (Harvard University) and Jaime Awe (Northern Arizona University)

[34]

Introducing the Ancient Maya Kinship Project Consultation, Engagement, and Outreach Program

New archaeological aDNA approaches have the potential to dramatically change our understanding of the ancient Maya but it is important that living Maya people are aware of the research, provide their thoughts and input, and give their consent given the involvement of ancestral human remains. This poster presents the ongoing interview based consultation process which we developed as part of the Ancient Maya Kinship Project. To date we have interviewed 200 descendant Maya in Cayo District, Belize, to gauge their level of interest in archaeology, ancient genomic research, and any concerns they may have with such research. After conducting these interviews, we found that people are very interested in new scientific approaches to understanding what their ancestor's lives were like. Most people wanted to be included in archaeological research and learn more about the findings of the study and other archaeological studies. With these findings in mind we began supplementing preexisting Belize River Valley Archaeological Reconnaissance project outreach activities by hosting lectures, tours, food events, and excavation training.

Tzib, Frank [226] see Martinez, April

Tzib, Frank [98] see Walden, John

Ugalde, Paula (Universidad Alberto Hurtado; Núcleo Milenio AFOREST)**[337]***Chair***Ugalde, Paula (Universidad Alberto Hurtado; Núcleo Milenio AFOREST), Rafael Labarca Encina (Pontificia Universidad Católica de Chile), Jay Quade (University of Arizona), Calogero Santoro (Universidad de Tarapacá) and Eugenia Gayó (Universidad de Chile)****[337]***Stable Isotopic Evidence for Camelid Mobility and Its Consequences for Early Hunter-Gatherer Settlement Patterns in the Hyperarid Core of the Atacama Desert, Chile*

We examine the stable isotopic signature of camelid and rodent remains from Paleoindigenous sites of the Pampa del Tamarugal (PdT), Atacama Desert (12,800–11,200 cal yrs BP; 800–1,200 m asl). $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values suggest two groups of animals: (1) with higher $\delta^{15}\text{N}$ signal and increased C_4 diet and, (2) with lower $\delta^{15}\text{N}$ values and a C_3 -predominant diet. Through isotopic and taxonomic analyses, we hypothesize that the group with higher $\delta^{15}\text{N}$ was not local but source to the Puna (3,200–4,000 m asl) and could correspond to vicuñas. The second group, possibly guanacos and rodents, could correspond to animals from the PdT or from the Andean Steppe (4,000–4,500 m asl). However, most remains come from residential areas and represent young camelids, indicating that they were hunted locally. This demonstrates that the PdT supported life and that it was not a passageway from the Andes to the coast. Since there are two groups of animals, some of them represented by fleece, we propose that there could have been movement of humans and camelid remains from the Puna to the PdT. This movement could respond to seasonal migration or congregation of hunter-gatherer bands in the Atacama's lowlands.

Ugarkovic, Marina [255] see Doyle, Emily

Ulanov, Aleksandr**[186]**

Microblade Industries of Northeastern Asia during the Holocene: Case Study of the Ust'-Khaita Site in Eastern Siberia

Microblade industries emerge around 20,000 BP and spread rapidly throughout Northeast Asia and Beringia. However, at the turn of the Pleistocene-Holocene, microblade industries disappear in some areas while persisting in other regions until the late Holocene. The reasons behind the uneven disappearance of microblade industries are not clear, and to understand the reasons of the sociocultural dynamics it is necessary to study early Holocene microblade industries in detail. The Eastern Siberian site of Ust'-Khaita is highly representative of microblade industry development in the early Holocene. The cultural layers 7, 8, 9, and 9A (dated back to 7000–8500 BP) contain wedge-shaped, demi-conical microblade cores and osseous slotted tools. The stratigraphy of the site allows us to analyze these cultural layers relative to the boreal climatic optimum. The study of Ust'-Khaita indicates that the technology of microblade production developed dynamically. The characteristic of microblade industries provides the data for studies of other regions such as Japan, where microblade industries disappeared in the early Holocene, and British Columbia, where microblade technology was used until the late Holocene.

Uldall, Tamara, Caitlin Limberg (HDR Inc.), Trevor Payne (HDR Inc.) and Jennifer Ferris (HDR Inc.)**[43]***An Industry-Focused Approach to Piling Recordation along the Shorelines of Grays Harbor County*

Following non-native settlement in Grays Harbor County, Washington, on the Pacific coast, the harbor and adjacent rivers became integral to the growth and prosperity of the region's growing timber-focused economy during the early twentieth century. Native shorelines were transformed as piling-supported trestles, log booms, timber mills, and commercial wharves lined the harbor and riverbanks during the area's peak of economic prosperity. The economic downturn of the Great Depression, unchecked timber harvesting, and

implementation of modern environmental regulations led to a decline in the timber industry and the closure of most of the area's mills and related businesses throughout the latter half of the twentieth century. Our poster discusses HDR's recent survey of the remnants of the area's historic past and our approach to comprehensively document the hundreds of pilings and associated features that still stand along the shorelines today. Although most of the pilings and features are linked to the region's early twentieth-century timber economy, the individual piling cluster or feature has its own unique story that are linked to specific functions or enterprises. While examining these pilings within the larger industrial landscape, we explore their histories through our industry-focused approach to best tell their individual and collective stories.

Ullah, Isaac (San Diego State University)

[46]

Chair

Ullah, Isaac (San Diego State University), Meredith Chesson (University of Notre Dame), Paula Lazrus (St. John's University) and Kostalena Michelaki (Arizona State University)

[46]

Climate Change and Rural Livelihood in Calabria, Italy

Understanding how human activity, climate systems, ecosystems, and earth surface processes interact to change the capacity for different human livelihoods over time is crucial to finding livable strategies for coping with the looming climate crisis. Community-engaged historical archaeology provides a lens for doing so across decades of time in the recent past and illustrates the impact of these changes in local communities. In this poster, I draw on historical weather station data to compile a temporally contiguous dataset of daily climate records of the vicinity of Bova Superiore, Calabria, for the period of 1916–2022. I complement these weather records with a monthly spatial record of vegetation health for the period of 1981–2022 derived from AVHRR and MODIS satellite imagery and historical records and archaeological survey to create a timeline of climate, vegetation, and land-use change in the region over the past century. These data are used as input to landscape evolution simulation experiments to understand the impact of changing climate and vegetation on soil loss dynamics in the area over time in the context of local patterns of land-use, water management, and community infrastructure and to contemporaneous social and political changes happening in the greater region.

Ullah, Isaac [151] see Carrer, Francesco

Ullah, Isaac [46] see Chesson, Meredith

Ullah, Isaac [260] see Mathwich, Nicole

Ullinger, Jaime, Julia Giblin (Quinnipiac University), Györgyi Párditka (University of Michigan), Remi Sheibley (Quinnipiac University) and Sarajane Smith-Escudero (Mississippi State University)

[68]

Illuminating Complex Mortuary Rituals in a Cemetery from Bronze Age Eastern Hungary

The Bronze Age Körös Off-Tell Archaeology Project (BAKOTA) has excavated 84 burials from a Bronze Age cemetery (Békés 103) located in the Lower Körös Basin in Eastern Hungary. Radiocarbon dates indicate that the cemetery was used for several hundred years, with the most active phase between 1600 and 1280 cal BC, a time that has been associated with the abandonment of tells in the region at the end of the Middle Bronze Age. Most of the burials were cremated and placed in ceramic urns. A systematic examination of MNI (minimum number of individuals), burned bone weight, and bone volume shows both consistency and variability across the cemetery. Urns contain evidence of one, two, or three individuals. Burials with multiple individuals typically consist of an adult and infant; however, some vessels contain only a single bone that is identifiable to another individual, or contain more than one individual, but significantly less total bone weight and volume than would be expected if all the bone had been included in the vessel. Altogether, this possibly points to a dynamic mortuary space where mourners and descendants actively engaged with the dead through practices such as repeated entry into the urns.

Ullinger, Jaime [68] see Giblin, Julia
 Ullinger, Jaime [68] see Gregoricka, Lesley

Ulloa, Rebecca
[69]

The Spatial Analysis of Housing Structures in Relation to Mortuary Features at Las Canopas (AZ T:12:137[ASM])
 Las Canopas (AZ T:12:137[ASM]) is a large prehistoric Hohokam village located on the south side of the Salt River with the site being occupied from the Estrella phase of the Pioneer period (AD 650–675) to the Civano phase of the Classic period (AD 1300–1450). During recent Phase II excavations at the site by Chronicle Heritage, a total of 285 mortuary features were encountered. The mortuary features were commonly located within housing structures floors and outside of houses often in discrete clusters. Statistical analysis conducted on the spatiality of mortuary features and housing structures suggests a shift in Hohokam society resulting in significant relationships created by the living relatives.

Ulloa Hung, Jorge (University of Miami)
[127]
Chair

Ulloa Hung, Jorge (University of Miami)
[127]

From Mayarí to “Protoagricola”: A Discussion on the Creation of Archaeological Cultures in Cuban and Dominican Archaeology

The diversity, complexity, and transformation of early settlers of the Caribbean are some of the main foci in current Caribbean archaeology. Since the 1960s, the presence of ceramics in some of these early contexts in Cuba and Hispaniola have generated new classifications and models where the ideas of diffusion, evolution, and transculturation dominate the explanations of this phenomenon. This has led to the creation of new cultures in both islands that impacted the traditional taxonomic and comprehension models of the early populations in the West Indies. This paper contextualizes and discusses the theoretical foci and how the archaeological evidence was managed in the creation of new cultures linked to this archaeological phenomenon in Cuba and Hispaniola. This paper also presents aspects of their current repercussion and questions that remain unanswered about the ceramic presence in the early archaeological contexts despite new advances and perspectives in studies of earlier populations in both islands and the Caribbean more generally.

Ulmer, Jacob [177] see Wilkes, Margaret (Meg)

Umberger, Leonardo [176] see Conger, Megan

Umbriano, Chiara (Arizona State University), Matt Peeples (Arizona State University) and Matthew Kroot (Arizona State University)
[102]

Assessing the Viability of Limited Collection and In-Field Analysis Strategies for Ceramic Investigations at S'edav Va'aki, Arizona

One of the primary goals of the Arizona State University field school at S'edav Va'aki was to use minimally disturbing methods to accurately characterize the nature, spatial extent, and chronological placement of features within the project area. This goal was developed in the initial project treatment plan in consultation with the City of Phoenix Archaeology office, the Tribal Historic Preservation Offices of the Gila River Indian Community and the Salt River Pima-Maricopa Indian Community, and the Arizona State Museum in order to

limit unnecessary site disturbance. As a result, the project team focused on recording and photographing artifacts in the field to the extent possible and only collecting a small subsample of objects for additional analyses where necessary. In this poster we provide an overview of the ceramic analyses conducted for this project demonstrating how we were able to rapidly and efficiently obtain substantial information for stylistic analysis, chronological seriation, spatial analysis, and temper/technological analysis while only making limited collections. The tools and methods developed as part of this project provide resources for future projects in the Phoenix area focused on Ancestral O'odham sites and could be adapted to other settings as well.

Unruh, Julie [305] see Murray, Wendi

Upton, Samantha (Cultural Resource Analysts Inc.)
[274]

Discussant

Ur, Jason (Harvard University)
[56]

Early Mesopotamian Urban Societies Were Not States

The “early states” of ancient Mesopotamia are factoids and straw men. Mesopotamia appears in textbooks as the prime example of the world’s earliest pristine states, and the flourishing of recent scholarship on the variability of other centralized large polities has often been via the juxtaposition of that variation against new datasets globally. Mesopotamian scholars have, however, been mostly slow to reassess our own centuries of scholarship through the lens of these other datasets. When one does, the Mesopotamian “state” appears as an anachronistic construct, throughout its first three millennia. This contribution begins by drilling down on the definition of “the state.” The definition used here draws on Max Weber and emphasizes patrimonialism and bureaucracy, a specific type of administrative structure, which did not exist in preclassical Mesopotamia. It was patrimonial at all levels, from farmer households to the household of the king; patrimonialism was not just a metaphorical extension of kinship but rather it was the durable indigenous form of kinship in Mesopotamia. Rather than kinship being replaced by the state, kinship evolved into a form capable of managing large societies in the way that scholars often assume is only possible via a state.

Urban, Patricia (Kenyon College) and Edward Schortman (Kenyon College)
[157]

Terminal Classic Copper Production at El Coyote, Honduras

Archaeologists have long speculated that western Honduras was one source of the copper artifacts found in southern Mesoamerica from the tenth century onward. Until now, there has been little field evidence to back up this claim. Work conducted at the major political center of El Coyote in 2002, 2004, 2013, and 2018 has yielded clear signs of copper processing up to the point of casting, signs of the last activity being more equivocal. The dates for the copper workshop, though not straightforward, strongly suggest that artisans worked here beginning in the ninth century. We describe in this paper the stages of copper working for which we have direct evidence at El Coyote, review the lines of evidence used to date these practices, and consider how copper working figured within the political formations that took shape at the center during the Terminal Classic (CE 800–1000). We close by considering the implications of these findings for our understanding of the tumultuous political and economic changes that characterized much of southeast Mesoamerica during the ninth through tenth centuries.

Urban, Thomas [326] see Duke, Daron

Urbina, Simón (Universidad Austral de Chile; Núcleo Milenio OHC), Leonor Adán (UACH, Núcleo Milenio OHC), Simón Sierralta Navarro (UACH), Diego Carabias (ARQMAR, Núcleo Milenio OHC) and Carolina Belmar (Universidad de Chile)

[77]

Arqueología histórica del colonialismo en contextos insulares: Chiloé y su jurisdicción (siglos XVI-XVIII)

Los principales núcleos urbanos y fortificaciones en Chiloé coexistieron con un centenar de asentamientos, llamados pueblos de indios, desde la fundación de Santiago de Castro en 1567. Desde ese momento, la dinámica de relaciones interétnicas habría incidido en la conformación del sistema colonial basado en prácticas de co-residencia hispano-indígena, transformadas luego por lógicas socioeconómicas de dominio y la inserción de Chiloé en redes de intercambio continental. Abordamos el estudio arqueológico de las relaciones interculturales e impacto colonial en el confín austral de América. Para ello, se intenta refinar estudio del colonialismo y los mecanismos de colonización desde un enfoque que discuta la inserción en la historia universal de los habitantes de Chiloé como un mero antecedente o complemento del proceso de implantación europea y de descendencia de las sociedades criollas o mestizas posteriores. Para ello, se ejemplifican las relaciones de dominación, violencia y el surgimiento de nuevas formas de interacción, nuevos grupos, materialidades y modos de vida como resultado de procesos hibridación y criollización. Analizamos el fenómeno colonial y sus mecanismos mediante casos específicos dentro de este paisaje archipelágico, donde un reducido contingente colonizador emula, integra y hace parte de sus prácticas orientaciones económicas e identidades indígenas preexistentes y emergentes.

Urbina, Simón [178] see Sierralta Navarro, Simón

Urbina, Simón [77] see Uribe, Mauricio

Urbina, Ximena [77] see Reyes, Omar

Ure, Scott (Brigham Young University) and Jake Hubbert (SWCA Environmental Consultants)

[183]

Maize in the Mix: Gas Chromatography Mass Spectrometry Analysis of a Fremont Ceramic Mug Recovered from the Snow Farm Site in Payson, Utah

The Snow Farm site, located on private farmland within the contemporary town of Payson, Utah, was inhabited by the Fremont people from approximately AD 700 to 1100 and is believed to have been a part of a larger village complex known as the Payson Mounds. The site is rich in Fremont artifacts and features, including three burials, some of which have been partially exposed by recent plowing. This study used gas chromatography mass spectrometry (GC-MS) to analyze soil from a small mug discovered in one of the burials that contained the remains of a middle-aged male. The analysis revealed traces of arachidic acid, commonly found in maize oil, extracted from maize kernels via mechanical or chemical means. Prior research suggests differential access to maize among the Fremont, with certain males consuming corn beer, implying elevated social status. These investigations indicate that these individuals, marked by maize-rich diets and elaborate burials, likely held higher societal positions. It is our suggestion that the mug found at the Snow Farm site likely contained a similar beverage, shedding light on the socioeconomic standing of the middle-aged male buried alongside this unassuming yet potentially significant ceramic vessel.

Uribe, Ines [299] see Tantaleán, Henry

Uribe, Mauricio (University of Chile), Pablo Méndez-Quirós (Independent), Alejandra Vidal-Elgueta (Pontificia Universidad Católica de Chile), Francisca Santana Sagredo (Pontificia Universidad Católica de Chile) and Simón Urbina (Universidad Austral de Chile)

[77]

Revisita a Pisagua Viejo: Abordajes de arqueología histórica en la costa desértica de Tarapacá (Chile)

En el siglo XIX aparecen referencias escritas sobre Pisagua Viejo y la existencia de una aldea con iglesia cristiana en plena costa desértica entre Arica e Iquique, la que se describe como “Antiguo puerto donde se hizo el primer embarque de salitre en 1836”. Sin embargo, hacia 1880, el sitio constituía una ruina, donde se reconoce que “Era una población de los antiguos indios changos, que han existido en todas estas partes de la costa antes de la conquista”. Esta aldea fue construida sobre las últimas capas de basuras prehispánicas del conchal que ocupa la terraza marina donde se dispone, lo cual puede remontarse a los 4000 años AC, en tiempos arcaicos y extenderse hasta los períodos cerámicos tardíos, incluyendo una ocupación marítima del Inca no evidenciada previamente. Coherente con aquello, el asentamiento hispano estuvo vinculado al tránsito marítimo, así como a la factoría de pescado y la producción de vino asociada al valle de Camiña, una de las cabeceras coloniales e indígenas de Tarapacá (ca. 1581-1792). En este contexto, Pisagua Viejo representa un excelente conjunto arquitectónico prehispánico e hispano de la costa de norte de Chile, ofreciendo nuevas posibilidades para la aplicación interdisciplinaria de métodos de arqueología e historia.

Uribe, Mauricio [223] see Wande, Claudio

Uribe Chinen, Claudia (PUCP)

[243]

Nominal Ruptures in Archaeological Heritage Governance? Heritage Ethics vs. Embedded Politics in the Participatory Paradigm of Peru's Qhapaq Ñan Project

This presentation discusses the permeability of the Qhapaq Ñan Project's participatory paradigm with historically rooted politics in archaeological heritage governance in Peru. In the early 2000s, the transnational nomination of the Qhapaq Ñan to the UNESCO World Heritage List harnessed a participatory approach for archaeological heritage management in the Andean region. Intergovernmental organizations advocating heritage conservation promoted this approach through recommendations, standards, and policies that emphasized community engagement, social inclusion, and sustainability. In the Peruvian context, specialists and managers of the Qhapaq Ñan's technical secretary (Lima) articulated strategies to build participatory practices out of a highly vertical and conservative heritage regime. Based on a qualitative methodology and archaeological ethnography, this study analyzes the processes, practices, and knowledge that underscore the Qhapaq Ñan's aim for a renewed heritage policy with a socially-sensitive ethos. It follows the concept of governmentality, to examine how the Peruvian state's technologies of power metabolized participatory and collaborative archaeology practices. The policymaking demonstrated tensions and resistances between emerging critical archaeological ethics and conventional forms of governing archaeological heritage. Therefore, it questions whether a state-led heritage participatory paradigm constitutes a nominal rupture that still favors the prevalence of the status quo.

Urquhart, Kyle

[290]

Political Economy in Neighborhood Public Space at Angamuco, Michoacan

This paper looks at changes in the relationships between elites and commoners in neighborhood public spaces at the site of Angamuco, Michoacan, Mexico, drawing from a combination of Marxian political economy and collective action theory. The study uses a combination of viewshed analysis, agent-based modeling of accessibility, survey, and excavation to analyze how different groups interacted with neighborhood public spaces, centered around shrines or small temples in residential neighborhood plazas. It argues that earlier Classic and Epiclassic period occupations show more separation between elite spaces and commoner spaces, both geographically and in terms of spatial patterns. By contrast, Postclassic occupations constituting the bulk of the southern margin of the site show a mixing of these two patterns. It concludes that elites were actively colonizing commoner public spaces within urban neighborhoods, which likely created tensions around the role of secondary elites in the centuries leading up to the Late Postclassic imperial state. The later state likely sought to resolve these tensions through the creation of central bureaucratic institutions that undercut the authority of secondary elites.

Utting, Benjamin (Smithsonian National Museum of Natural History), Agustin Capriati (Wageningen University & Research), Annette Oertle (University of Vienna) and Dylan Gaffney (University of Oxford)

[289]

The Raja Ampat Project

This presentation will introduce the Raja Ampat Project, a multidisciplinary effort to explore evidence for (1) the initial settlement of eastern Wallacea and (2) how humans adapted to and transformed island environments over time. The Project has four main strands: (1) excavations of new material, (2) material culture analyses, (3) zooarchaeological analyses, and (4) prehistoric and modern marine ecology. The presentation will provide an overview of research that has already been conducted at Raja Ampat, some preliminary data that have been collected, and several avenues for future research.

Uzzle, Stephen (University of Arizona)

[176]

Marxist Dendroarchaeology: Examining Labor's Effects on Landscapes and Living Conditions in Cebolla Canyon, New Mexico

The effects of unregulated (laissez-faire) capitalism on working class people and on landscapes are often only beneficial in the short term. The 1930s were especially difficult times for Americans as people became displaced during the Great Depression and the Dust Bowl. Many were forced to move into new areas in search of work and better living conditions for themselves and their families. This research examines labor's effects on landscapes and on the living conditions of Dust Bowl migrants using a multidisciplinary approach including dendroarchaeology, historical records, oral histories, and artifact analysis from early twentieth-century logging sites and homesteads in the Cebolla Canyon area of west-central New Mexico. The results help us to better understand labor conditions, including identifying periods of heavy logging in the area, examining how logging sites were structured and grew over time and assessing the living conditions of workers and their families. They also reveal long term landscape and ecological effects of logging under these labor conditions.

Vacca, Kirsten (University of Hawai'i, West O'ahu)

[10]

Discussant

Vacca, Kirsten (University of Hawai'i, West O'ahu) and COSWA Committee Members

[129]

The History and Future of COSWA

The Committee on the Status of Women in Archaeology (COSWA) was formed to “understand the current status of women in the profession through the gathering of data and to improve the position of women in archaeology” (SAA.org). Influences from gender and feminist theory over the years have informed the work COSWA does to address barriers faced by women in the discipline. As the Society for American Archaeology strives to become more diverse and inclusive, COSWA is also working to expand our scope to identify and address barriers faced by people across the gender spectrum in archaeology. This paper will review the scholarly influences that inform our understanding of and approach to gendered issues in the discipline. We will also review current initiatives, future plans, and how to get involved with COSWA to participate in and/or contribute to our diversity, equity, and inclusion initiatives.

Vail, Alexander (Northwestern University) and Erin Waxenbaum (Northwestern University)

[47]

Osteogrammetry: The Efficacy of SfM Photogrammetry for Documenting Human Skeletal Remains

This research refines methods of digitally documenting human remains from archaeological contexts using structure-from-motion (SfM) photogrammetry and confirms the accuracy of employing this method for

metric and nonmetric data collection. SfM photogrammetry offers a low-cost and accessible way to create accurate 3D digital models of skeletal elements from 2D photographic data using little specialized equipment which could be accessible to most archaeological field projects. This research includes two pilot studies. The first will evaluate the metric accuracy of the skeletal models by comparing measurements taken from 20 femora by an experienced forensic anthropologist, a bioarchaeology student, and from digital models created and analyzed with Agisoft Metashape. T-tests will be used to determine the degree of interobserver error introduced by digital model creation and measurement processes. The second pilot study will examine the potential for non-metric, pathological analyses using digital models by analyzing skeletal remains recovered from three burials at a medieval site in San Donato, Lamon, Italy, modeled on-site during a single field season. The photographic quality of SfM models potentially acquired during the recovery process allows for close examination of surface texture unachievable by other methods of 3D documentation such as computed tomography and laser scanning.

Vail, Gabrielle (UNC-Chapel Hill) and Maia Dedrick (Santa Clara University)
[83]

Beekeeping, Ancestral Knowledge, and Interspecies Relationships: Exploring Place-Based Heritage in Yucatán
In her article “Saving the Other Bees,” Eve Bratman (2020) explores the successful reintroduction of beekeeping practices associated with the stingless species *Melipona beecheii* in the Yucatán Peninsula, which has resulted in the species thriving following near extinction. She attributes this success to grassroots initiatives undertaken to address biodiversity losses that emphasize cultivating intergenerational and interspecies relationships. This paper explores these topics through a multifaceted approach that focuses on ancestral knowledge of beekeeping practices encoded in the prehispanic (likely fifteenth century) Madrid Codex, and how communities today are engaging with these knowledge systems through intergenerational events that strengthen place-based heritage. We consider what the Madrid beekeeping almanacs—arguably created by scribes from the northern Yucatán Peninsula—reveal about stingless bee care and management, interspecies relationships, and cosmology; and how communities of eastern Yucatán, once a thriving region of honey production, identify with the beekeeping tradition documented in the codices and later postcontact sources, incorporating study of the Maya codices into secondary school education and displays at community museums. This connection to their ancestral past—and to the intangible heritage incorporated in the almanacs painted by the *ah tz'ib'* (scribes)—provides a source of pride and identity for communities in the region.

Vail, Gabrielle [29] see Hernandez, Christine

Vairamuthu, Thivviya [147] see Patton, Katherine

Valadez, Jocelyn (New Mexico State University)
[200]

The Zooarchaeological Remains from San Miguel de Carnué (LA 12924)

I present an analysis of zooarchaeological remains recovered from the 2022 New Mexico State University Archaeological Field School directed by Dr. Kelly Jenks and a 1946 University of New Mexico Archaeological Field School directed by Dr. Paul Reiter at the ancestral frontier settlement of San Miguel de Carnué, occupied AD 1763–1771 in Tijeras Canyon, east of Albuquerque, New Mexico. This analysis is shaped by the understandings of the cultural, ecological, and economic changes caused by the introduction of domestic animals such as cattle, sheep, and goats as New Mexico’s communities were drawn into Spain’s transoceanic empire. I analyze human, animal, and environmental modifications; variations in anatomical part representations; taxonomic abundance; animal management styles; and how these animals contributed to the colonial economy. I compare my results to zooarchaeological assemblages recovered from Paa-ko, Tijeras Pueblo, and other neighboring sites in the Tijeras Canyon region.

Valadez Azúa, Raúl, and Bernardo Rodríguez Galicia
[152]

Los cánidos en las ocupaciones post-teotihuacanas

Derivado del proyecto arqueológico “Estudio de túneles y Cuevas en Teotihuacan” es una colección de 455 cánidos que fueron estudiados para conocer su diversidad y la forma como interactuaron estos animales con los hombres en las diversas épocas (siglos VII-XX). En la colección fueron reconocidos perros comunes, xoloitzcuintles, híbridos de lobos y perros y coyotes. Las medidas obtenidas indican que los perros eran animales medianos y los híbridos de talla 20% mayor. Estos cánidos fueron principalmente animales que fueron utilizados por la gente, aunque también hay evidencia de ejemplares que vivieron en los túneles en épocas en las cuales hubo poca presencia humana en la zona. Los resultados mostraron que entre los siglos VII y IX el empleo de estos animales involucró lo funerario, el cuidado de espacios sagrados y ritos relacionados con el inframundo; entre los siglos IX a XII ritos relacionados con el agua; entre los siglos XII y XVI ritos ligados al agua y la guerra, así como actividades de manufactura y posteriormente protector y compañía de vivos bajo el esquema de pensamiento europeo.

Valdez, Fred, Jr. [276] see Adam, Manda
Valdez, Fred, Jr. [213] see Hyde, David
Valdez, Fred, Jr. [164] see Pengilley, Alana
Valdez, Fred, Jr. [251] see Robertson, Robin

Valenti, Matthew [255] see Hirshman, Amy

**Valenzuela, Daniela (Universidad de Tarapacá), Indira Montt (Universidad de Tarapacá),
Marcela Sepúlveda (Universidad de Tarapacá) and Persis Clarkson (University of Winnipeg)**
[156]

Interpretative Approaches in Rock Art and Geoglyphs of the Atacama Desert: Between Theories and Methods

This study reviews the range of interpretative approaches that have delineated rock art research in the Atacama Desert, which has been mainly informed by ethnohistorical, ethnographic, and landscape archaeology perspectives. We focus on the role that prevailing Andean archaeological theories have played in the questions raised by archaeologists investigating rock art and geoglyphs and discuss how these theories are connected to the suite of methods employed to answer such questions. The main ideas, questions, and theoretical and methodological frames of reference that have been used are assessed, and we discuss the place of rock art and geoglyphs within the context of major problems of the discipline at a regional and global level.

Valeria, Cortegoso [306] see Marsh, Erik

Valgaz Díaz, Juan Pablo [161] see Yamamoto, Atsushi

Vallejos, Joshua (Barr Engineering Co.)
[41]

Paleoenvironmental Reconstruction of Two Paleoindian Sites in North-Central New Mexico

Mapping environmental change through time can help archaeologists better understand patterns of human resource use. This poster presents the $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ values for bison teeth at two Paleoindian sites (Boca Negra Wash and Water Canyon) in north-central New Mexico. The $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ values are compared across the two sites to evaluate if there is a change in the habitat and climate occupied by the bison (and the humans that hunted them) during the Younger Dryas and Early Holocene. The results show that $\delta^{13}\text{C}$ values

remained consistent during the two periods, while the $\delta^{18}\text{O}$ values were more negative in the Younger Dryas than in the Early Holocene. Additionally, the $\delta^{13}\text{C}$ results demonstrate that the ratio of C_3 to C_4 grasses remained constant during the Younger Dryas and Early Holocene. My preliminary conclusion is that the $\delta^{18}\text{O}$ shift reflects distinctive hunting strategies during the two periods by the humans that preyed on the bison. However, further research is needed to demonstrate if the $\delta^{18}\text{O}$ values are due to climate or the herding patterns of the bison.

Van Alst, Emily (Washington State University)

[129]

Incorporating Indigenous Feminist Theory into Rock Art Interpretation

The study of gender within the archaeological discipline has been a cornerstone of archaeological theory since the late 1980s. Though the study of gender has been foundational in changing our understanding of past peoples, there has been a severe lack of consideration of Indigenous women's knowledge as well as Indigenous feminist methodologies and theories within archaeological practice. This paper will examine not only how to incorporate Indigenous feminist thoughts but also how to identify Indigenous women's knowledge related to the archaeological record. Combining archaeological gender scholarship and Indigenous feminist philosophy, I synthesize the two theoretical frameworks to better understand Indigenous women-made rock art motifs from the Northwest Plains. I suggest that Indigenous women's specific ecological and cultural knowledge is essential to better interpreting and contextualizing this particular type of iconography. A sentiment that I wholly believe extends to aspects of the archaeological record created by other diverse and intersectional populations.

Van Alst, Emily (Washington State University)

[182]

Discussant

Van Alstyne, Benjamin (UNLV)

[103]

Architectural Investigations at a Multicomponent Site on the Shivwits Plateau

During the summer of 2019, members of the University of Nevada, Las Vegas, excavated two rooms within Pete's Pocket, a Virgin Branch Puebloan site located on the Shivwits Plateau, Arizona. The rooms, located about 300 m from the north rim of the Grand Canyon, were contiguous and circular, forming an almost Figure 8 shape. An unusually large amount of stone was associated with one of the rooms suggesting it likely was a tower. The second room had walls that suggest it was built using two types of construction technologies and it contained numerous handstones on its floor. We used Building Information Modeling, photogrammetry, and 3D modeling to analyze the architecture. The implications of these findings are discussed.

Van Buren, Mary (Colorado State University)

[132]

Isolation, Innovation, and Fraud: Assessing Failure in Historical Mining and Metallurgy

Mining and metallurgy are high-risk endeavors, and failure is common. In the first, the extent and nature of ore deposits are unknown, and the second is prone to mishaps due to inadequate temperature control, poor quality ore, and refractory malfunction, among other factors. Thus, failures in this industry—as measured by output—can be easily attributed to technical problems. However, placing them in broader context can lead to more nuanced and interesting answers that frequently implicate specific social processes in the failure to produce adequate amounts of metal. An examination of early colonial smelting in Porco, Bolivia, and nineteenth-century mining in Colorado illustrates how three such processes can result in failure: isolation from a community of practitioners, innovation, particularly by novices, and fraudulent behavior intended to deceive buyers and investors. Further investigation will undoubtedly reveal multiple reasons why technologies fail, suggesting that failure is an integral part of the human experience, rather than an isolated and exceptional event.

Van Dalen, Bastiaan (University of Exeter)**[245]***Bridging the Gap: Exploring Historical Human-Environment Dynamics within a Biodiversity Hotspot in the Gulf of Guinea*

To help protect the Earth's diverse species from disappearing at an alarming rate, research is needed in important biodiversity hotspots to understand how humans have interacted with their environment throughout history and how these insights can contribute to their future sustainability. Archaeology and paleoecology are ideally positioned for this. Unfortunately, however, Africa's islands have been largely overlooked. To bridge this gap, our research focuses on São Tomé and Príncipe, one of the most understudied biodiversity hotspots in the world, situated in West Africa's Gulf of Guinea. Being possibly the only country where no systematic archaeological fieldwork has yet taken place, Príncipe, in particular, offers an excellent research opportunity due to its exceptional biodiversity, high level of endemism, recent human presence, small size, low population, and limited urban development. With our research, we aim to shed light on the historical relationship, past and present, between humans and their environment in the archipelago. Following our earlier paleoecological fieldwork—the first of its kind on Príncipe—we will now conduct the first archaeological research on the island through an archaeological reconnaissance of the entire island using technologies like lidar, along with archaeological surveys and test excavations.

Van Den Bel, Martijn**[127]***Early Ceramics in the Coastal Guianas*

Ancient ceramics (beyond 2000 BC) have been found in the western part of the Guianas, notably in the coastal swamp areas of Guyana from the 1950s onward (Alaka). They are also known from the Courantyne River in Suriname (Kauri) and have only recently come to light in western French Guiana. The latter have been found at the terraces of the Lower Maroni River (Saint-Louis) between Suriname and French Guiana but also buried deeply in the White Sand Formations between the Sinnamary and Kourou Rivers in Central French Guiana (Eva 2), dubbed recently Balata for French Guiana. These ceramics are believed to be part of a larger early ceramic complex that emerges between Guyana and to the east of the mouth of the Amazon River (Mina) from ca. 3000 BC. In French Guiana they are also found in combination with rock-filled pits or earth ovens marking the introduction of earthenware and different modes of food preparation. The absence of griddles is notable for this complex and clearly differs from the (much) later ceramic complexes in the Guianas which appear by the end of the first millennium BC.

Van den Eynde, Guido [334] see Veselka, Barbara

VanDerwarker, Amber (UCSB), Douglas Kennett (UCSB), Heather Thakar (Texas A&M), Victoria Newhall (UCLA) and Kenneth Hirth (Pennsylvania State University)**[128]***A New Locus for Avocado Domestication in Mesoamerica: Evidence for 8,000 Years of Human Selection and Tree Management at El Gigante, Honduras*

Recent research demonstrates that ancient Mesoamericans engaged in forest management long before they domesticated maize. Our research from El Gigante provides additional evidence for the antiquity of tree management practices in several different economically useful species. This presentation focuses on the avocado assemblage, represented by desiccated pits, pit fragments, and rind fragments, the latter numbering in the thousands. Using metric analysis of these materials, we demonstrate in situ domestication over an 8,000-year period, during which time pits got larger and rinds thicker as people selected for larger fruits. These findings establish southeastern Honduras as a new center of avocado domestication.

Van Dyke, Ruth (Binghamton University)**[28]***Exploring the Chacoan Landscape of the North American Southwest*

The UNESCO World Heritage Site of Chaco Canyon, in the North American Southwest, is well known for its monumental architecture and carefully choreographed landscape. Chaco Canyon lies at the heart of a 60,000-square-mile area that contains some 200 additional major great house communities, as well as features such as roads, agricultural fields, and rock art. Recent work across this landscape focuses on Native American descendant communities' deep and rich understandings of their ancestral places. Phenomenological and sensory explorations using GIS, lidar, and on-the-ground experiments provide dimensions that mesh well with Native perspectives. On the greater Chaco landscape, archaeologists and Indigenous cultural experts are working together to learn from one another and to protect the archaeology from destructive mining activities.

Van Dyke, Ruth [172] see Primeau, Kris

Van Keuren, Scott (University of Vermont), Marieka Brouwer Burg (University of Vermont), William Graves (Statistical Research Inc.) and Tate Norwood (University of Vermont)**[172]***Visions Around and Within: A GIS-Based Viewshed Analysis of Ancient Ballcourts in Northern Arizona*

By the eleventh and twelfth centuries AD, the region around modern-day Flagstaff was an emergent ceremonial landscape, evidenced by the proximity of sacred places, important topographic features, and large forms of ritual architecture. The latter included plazas, unroofed great kivas, platformed spaces, and ballcourts, which were engaged by people traversing a broader network of trails and shrines. In this poster, we consider how this landscape was experienced by examining the location and visibility of the region's 12 known ballcourts. These represent the northernmost examples of this quintessential Mesoamerican structure. Despite similarities in size and alignment, each seems to have unique visibilities in terms of viewership and sightlines to significant landforms. This poster uses GIS viewshed tools to explore two dimensions of ritual experience through visibility: how ballcourt activities were viewed from surrounding terrain and what vistas were observable from within the structures themselves.

Van Keuren, Scott [6] see Koutrafour, Vasiliki

van Niekerk, Karen [55] see Alsgaard, Asia

Van Oss, Sarah (Tulane University)**[173]***Pulling it Together: Collecting, Collating, and Analyzing Quantitative Data from Written Reports using R*

Due to the nature of long-term archaeological investigations, data collection and curation methods change over time. This means that data can end up in several physical and digital locations, making the analysis of evidence challenging if it was collected years apart or by several investigators. In Lowland Maya archaeology, annual reports are required to be turned in to the government for the public record. Because they are regular publications and contain much of the information collected in the field, these reports, or informes, can be an easy and efficient way to gather site data when original collection documents are decentralized or not easily accessible. This poster describes how to employ R to collect and collate data into a database from these reports. This method allows for a deep and diachronic analysis of archaeological data that can be compared with current investigations and evidence, creating a more complete picture of the past. Collecting data from previously published reports also presents possibilities for the study of heritage data that has long been ignored or overlooked in archival collections. Overall, using R to collect data from reports can provide important context for current and future investigations.

VanPool, Christine**[333]***Chair***VanPool, Christine and Gavin Easley (University of Missouri)****[333]***Shaman-Magicians and Their Ecstatic Trances*

Altered states of consciousness (ASC) is a defining characteristic of shamanism. ASC, however, is not unique to shamans nor is it a single neurological/physiological phenomenon. Mystics and mediums also use ASC, and mediums are even “possessed” to greater or lesser degrees. In contrast, most shamans go on soul flights during “ecstatic” trances. (“Ecstatic” in this context means to be outside oneself as opposed to pleasurable.) During ecstatic trance, shamans interact with and manipulate unseen beings, energies, and/or deities. They hunt witches, petition deities, find objects, and divine the future. They might calm a sea goddess, so she releases the game animals she holds, or aid warriors as they attack their enemies. Shamans are consequently magicians, because magic is fundamentally about manipulating unseen beings and energies to effect changes in the physical world. As magicians they use magical items (e.g., drums, rattles, quartz crystals, fetishes) to better interact and engage with hidden forces and beings. Conceptualizing shamans as magicians shifts our focus to different aspects and roles of shamanism than are typically considered. Here we present cross-cultural regularities of “shamans as magicians” and their magical artifacts and tie them to the anthropology of magic.

VanPool, Christine [333] see Easley, Gavin

VanPool, Christine [266] see Mueller, Rachel

VanPool, Christine [333] see VanPool, Todd

VanPool, Todd (University of Missouri)**[333]***Chair***VanPool, Todd (University of Missouri), Christine VanPool (University of Missouri) and Brandon Massullo (Wooster Community Hospital)****[333]***Haunted Paquimé and the Creation of a Magical Community*

Human cognition both enables and limits the ways humans can interact with spirits and forces that are typically unseen or that otherwise transcend the physical world. Research in psychology, anthropology, and related fields indicates that social and physical contexts are central to activating the cognitive frameworks that facilitate spirit-human interaction, especially when paired with entheogens, physiological stress (e.g., sleeplessness, prolonged hunger, pain), and other factors that instigate altered states of consciousness. Here we explore how the built environment of Paquimé, the ceremonial heart of the Medio period (AD 1200–1450) Casas Grandes culture (northwestern Mexico), was intentionally formed to create environments that are cross-culturally associated with “haunted” locations that encouraged significant spirit-human encounters. This includes the use of light, the placement of burials and symbolically significant materials, and the form of the buildings themselves. These are linked to create inherently magical locations in that they have bundled objects and features that reinforce each other’s potency for representing and making accessible the spirit world. These locations consequently were distinctively primed to inspire spirit-human encounters. Examples we consider are the T-shaped ballcourt with its architectural and symbolic elaborations and other interior ceremonial spaces associated with human remains and darkness.

VanPool, Todd [266] see Mueller, Rachel

Vargas, Geissel [222] see Nunez-Cortes, Yajaira

Vargas Díaz, Juan Pablo [299] see Arias Espinoza, Oscar

Vargha, Maria (Charles University Prague; University of Vienna) and Martin Fajta (Charles University Prague)

[91]

Digital Humanities and Religious and Social Archaeology of Medieval Central Eastern Europe: New Trends and Approaches

The present paper introduces the ERC project RELIC and its sister WEAVE project REPLICO, modeling how the general population was involved in significant historical processes such as Christianization and state formation by conducting a complex, comparative analysis and contextualization of archaeological and historical remains of the rural population living on the eastern fringes of the HRE during the Ottonian and Salian periods (tenth–twelfth centuries), exploring the influences of centers and networks of secular and ecclesiastical lords, of the natural environment, and of the economic infrastructure. Investigating this often-overlooked segment of the population, its hitherto unexplored or neglected role allows us to study how (top-level) changes in political and ecclesiastical organizations can be reflected in the evidence concerning the lower levels of society and of the local church network; how different strategies worked in different political settings, and what role local initiatives/agencies could have played in religious and political shifts.

Varillas, Rosa (University of Illinois, Chicago)

[193]

Preliminary Survey and Excavations at Puerto Inka

Located 800 km from Cuzco, the Inka capital, Puerto Inka served as a crucial junction, linking the coastal Inka road with a transversal route to Cuzco. However, this region had remained underexplored in previous studies. By conducting excavations and surveys at Puerto Inka and its surrounding area, this research aimed to shed light on the Inka Empire's political economy, its methods of control, and the roles of local groups in this complex web of infrastructure. Additionally, it sought to compare Inka imperialism in the southern coast with other regions, ultimately contributing to a deeper understanding of the Inkas' unique mosaic of control and their place in history. Through satellite imagery, on-site visits, photogrammetry, digital mapping, ceramic analysis, and minor excavations, this comprehensive research endeavor provided insights into the Inkas' statecraft, their interactions with peripheral regions, and the significance of key sites like Puerto Inka in unraveling the mysteries of this ancient civilization.

Varney, Tamara [135] see Brown, Matthew

Vasquez Pazmino, Josefina (Universidad San Francisco de Quito)

[220]

The Puruwá Border: Archaeological Footprints and Ancestry in Tungurahua and Chimborazo, Ecuador

Who are the descendants of the ancient Puruwá? Archaeological settlements located in the central highlands of Ecuador, share certain features which researchers used to interpret as the materiality of ethnohistoric Puruwá. Human figures and heads manufactured in ceramics with profuse decorated faces and adorned in jewelry, copper ornaments, necklaces, beads made of shells, including *Spondylus*, and quartz appeared in individual tombstones. In addition, and recurrently, fine Cosanga-Píllaro vessels form part of the funerary pottery found in Puruwá sites. New evidence of such settlements in Puculpala, Colta, Patate Urcu, Píllaro, and Salasaka not only shows earlier occupation, but also continuous land use from the Formative to present times. Artifacts as well as environmental transformations are the footprints which lead to understanding the ancestry of Tungurahua and Chimborazo native descendants.

Vassilatos, George [137] see Pfannkuche, Sara

Vaughn, Evie, Kathryn Catlin (Jacksonville State University) and Douglas Bolender (University of Massachusetts, Boston)**[48]***Imagining Kotið: Artistic Visualization as Archaeological Practice*

This poster offers an artistic visualization of the Viking Age dwelling at Kotið, North Iceland. Based on geospatial data and photogrammetry collected in 2022 and 2023, the rendering demonstrates how this structure differs from previously excavated turf dwellings in Viking Age Iceland. Its small size, arrangement of interior space, and alterations to the walls and hearths suggest that it may make sense to interpret the dwelling as something other than a traditional longhouse. This poster demonstrates the utility of artistic renderings as an aid to archaeological interpretation, as we grapple with interpreting an unusual building form while disentangling the Viking Age dwelling from at least four other buildings later constructed on its footprint.

Vazquez, Mariana (University of Cincinnati)**[31]***Lidar-Based Aboveground Biomass Estimations for the Maya Archaeological Site of Yaxnohcah, Campeche, Mexico*

This study introduces a method for estimating aboveground biomass (AGB) in contemporary tropical forests near archaeological sites using lidar technology. Accurate AGB estimates are crucial for assessing wood resources available to the ancient Maya for city development. We propose a lidar processing model for the Yaxnohcah archaeological site's surrounding forest. Tropical forests exhibit diverse species distribution, necessitating consideration of this variation for precise AGB estimates. We identified four vegetation communities through Sentinel-2 satellite image classification and conducted field surveys within 73 500 m² transects. AGB estimates for transects required diameter, height, and wood-density measurements. Linear-derived models provided the relationship between each vegetation type's field data and lidar statistics. Predicted AGB values aligned with field measurements but varied between vegetation types: 83 Mg/ha for lowland forest, 178 for transition forest, and 215 for upland forest. These findings facilitated the creation of a wall-to-wall AGB map based on vegetation classes, enhancing archaeological research on past land use. The vegetation classification also revealed a spatial relationship between vegetation communities and the distribution of archaeological features in the ancient city of Yaxnohcah.

Vazquez Fiorani, Agustina (University of Notre Dame) and Mark Schurr (University of Notre Dame)**[202]***Experimental Archaeology of Traditional Andean Foods: A Contribution from Organic Residue Analysis of Replicated Formative Cooking Vessels from Northwest Argentina*

Organic residue and lipid analyses of ceramic artifacts provide important direct information on subsistence economies and foodways, pottery technology, and exchange and trade. Residue analysis needs to be enhanced by experimental data and reference libraries that provide solid frameworks to construct archaeological interpretations. Inspired by the extensive work on Old World experimental frameworks, this research focuses on South America species of economic and cultural interest within prehispanic societies by presenting the results of experimental and community-based work conducted in the Argentinian Andes with Indigenous communities (Tafí del Valle, Tucumán). We partnered with an Indigenous potter to replicate ancient cooking pots from the Formative period (ca. 200 BC–AD 800). Next, we cooked different traditional recipes using locally sourced, organic ingredients (maize, quinoa, squash, and llama meat) known to have been grown by villagers in the past. Culinary experiments were repeated several times to emulate daily use. Pots were buried for two months to simulate decay and then sampled for residue analysis by GC-MS and GC-C-IRMS. This poster contributes to understanding the agentive role of foodways in the adoption of farming lifeways by providing an interpretative frame for the identification of absorbed residues of traditional Andean villager foods and meals.

Vázquez López, Verónica (Escuela Nacional de Antropología e Historia; Univ. Nacional Autónoma de México)**[292]***Discussant***[125]***Chair***Vázquez López, Verónica (Escuela Nacional de Antropología e Historia; Univ. Nacional Autónoma de México), Hannah Zanotto (University of Arizona), Kazuo Aoyama (Ibaraki University) and Takeshi Inomata (University of Arizona)****[125]***The Middle Preclassic Site of Pajonal and Its Interactions with La Venta and Aguada Fénix*

Pajonal is a Middle Preclassic site situated between La Venta and Aguada Fénix in Tabasco, Mexico. The site has a spatial layout similar to La Venta, formed by an elongated plaza with an E-Group at its center, several structures to the east and west edges, and a mound to the north. This pattern has been defined as the Gulf Middle Formative standardized complex, a subtype of the Chiapas Middle Formative pattern. Pajonal also has traits that resemble Aguada Fénix, i.e., 20 aligned structures on the east and west edges of the main plaza and a similar orientation. These traits make Pajonal a key site for understanding the interaction between the Middle Usumacinta region and La Venta. In 2022 we conducted excavations in the E-Group plaza. About two-thirds of the recovered obsidian was imported from San Martín Jilotepeque, Guatemala, and one-third was from highland Mexico, while the ceramics, highly eroded, include Middle Usumacinta region and Olmec types. These results indicate that the inhabitants of Pajonal interacted with both regions, although they were more actively involved with the obsidian exchange routes in the Maya area than with Highlands Mexico during the late Middle Preclassic period.

Vázquez López, Verónica [78] see Kupprat, Felix

Vázquez López, Verónica [125] see Mendez Bauer, Maria Belen

Vázquez López, Verónica [78] see Reese-Taylor, Kathryn

Veach, Shawna [213] see Walling, Stanley

Velasco, Matthew (Cornell University)**[185]***Mummies and Mortuary Monuments Revisited: A Bioarchaeological Perspective on Ayllus and Open Sepulchers*

Open sepulchers (chullpas) are typically thought to have marked the social and territorial boundaries of Andean ayllus, corporate landholding groups based on descent. This proposed relationship between chullpas and ayllus follows from colonial-era accounts of Andean mortuary practices and finds empirical support in the archaeological record, in accordance with mortuary theories that link ancestral tombs to the demarcation of resource rights. Yet, ayllus are more than closed corporate groups. They are also integral wholes composed of multiple parts and different kinds of “persons.” Drawing on a decade of bioarchaeological research, this paper explores nested patterns of relatedness and difference at a large prehispanic chullpa cemetery in the Colca Valley, Peru. Tombs at the site were built one against the other in an agglutinated fashion, suggesting that chullpa practices were as much about building affinities as they were about staking differences.

Furthermore, cranial modification and isotopic data reveal that individuals buried together in open sepulchers embodied distinct identities and even relations to the land, a finding that does not undermine a relationship between tombs, ayllus, and resource rights so much as illuminate it. From a bioarchaeological standpoint, open sepulchers provide a window into ayllu practices in life as well as death.

Velasco Arzabe, Daniela [158] see Capriles, José

Velasquez, Cesar [13] see Sánchez, Blanca

Velásquez García, Erik (Universidad Nacional Autónoma de México), Sandra Balanzario Granados (Centro INAH Quintana Roo) and Alexandre Tokovinine (Alabama University) [159]

La ofrenda del Edificio 5 de Ichkabal, Quintana Roo: Contexto arqueológico y observaciones epigráficas e iconográficas en torno a un cache del Preclásico Tardío

En abril de 2009 los arqueólogos Enrique Nalda Henández, Sandra Balanzario Granados y Karina González Hernández excavaron una ofrenda (*cache*) en el interior de una subestructura del Edificio 5 de Ichkabal, megalópolis maya del Preclásico ubicada en el sur de Quintana Roo. Dicha ofrenda contenía fragmentos de cerámica, copal, orejeras de jade y otros objetos, incluyendo un plato del grupo Sierra rojo en cuyo interior había seis conchas *Spondylus*. Las paredes del plato preservan un mismo cartucho jeroglífico pintado en sus cuatro lados (presumiblemente asociado con los rumbos cardinales o con las esquinas que alcanza el Sol en los solsticios), mientras que dos de las conchas tienen escenas y jeroglifos incisos, que parecen relacionarse con una narrativa mítica. En esta ponencia expondremos los detalles del contexto arqueológico, así como las distintas posibilidades interpretativas que conocemos para acercarnos al significado de las imágenes y los jeroglifos. Nos apoyaremos, además, en el informe técnico sobre las características fisiológicas y orgánicas de las conchas (Mainou Cervantes 2012), como también en el levantamiento digital 3D, fotogrametría (Balanzario Granados y Tokovinine 2020) y dibujos de las mismas.

Velázquez Morlet, Adriana [32] see Tsukamoto, Kenichiro

Véliz Corado, Fernando [26] see Garrison, Thomas

Venditti, Flavia [282] see McCartin, Madison

Vendome-Gardner, Charlotte (University of Exeter)

[244]

Chair

Vendome-Gardner, Charlotte (University of Exeter)

[244]

Beyond the Stereotype: Working toward a Landscape-Based Model of Study and Cross-Cultural Exchange of Fluteplayer Rock Art Imagery in Chaco Canyon

The Fluteplayer is widely recognized within rock art, characterized by a figure holding and/or playing a flute. It has been misinterpreted as the Kachina Kokopelli. As a result it is now entangled with modern, predominantly Western, interpretations of the Kokopelli character, which are subsequently rooted in shamanistic interpretations of fertility. Although this association has been discredited, the ubiquitous interpretation of Fluteplayer imagery as Kokopelli detracts from the true cultural value of individual and unique imagery. This discussion will present current PhD research which aims to address this discourse within the study of Fluteplayer imagery using a landscape-based approach to establish a context and wider sociocultural placement of the image within Chacoan society, working toward a model of cross-cultural and respectful sharing of knowledge with Indigenous people. Research results are already showing diverse contextual placements for Fluteplayer imagery, alongside the comparative analysis of flute artifacts, illustrating the figure's wider sociocultural placement. With further planned research to conclusively understand the placement of the Fluteplayer within Chacoan society, it will move the image beyond the stereotype, offering a wider discussion about the image, alongside supporting the value of rock art and Indigenous knowledge to the wider academic community.

Venter, Marcie (Murray State University)**[163]***Discussant***Venter, Marcie (Murray State University), Lourdes Budar (Universidad Veracruzana) and Philip Arnold (Loyola University Chicago)****[216]***Expressions of Ballgame Ritual Participation at Matacanela in the Sierra de los Tuxtles*

In this presentation, we consider the accumulated evidence for ballgame ritual participation throughout the Classic period center, Matacanela, located in the south-central Tuxtla Mountains. We also account for related symbols from settlements in the immediate outskirts and incorporate them into the view of the broader cultural landscape. During fieldwork conducted over the past decade, several ritual deposits were encountered during stratigraphic excavations that suggest that the occupants of the area participated in varying ways in the larger ballgame phenomenon—the manifestations of that ritual engagement were both monumental and modest in scale. Ballcourts were constructed, sculpture was manufactured, and both were placed in arrangements that highlighted their changing importance during the site's growth, apogee, and decline. Moreover, portable symbols' personalized engagement in these collective rituals reveals ways that the ballgame and its participant observers linked the tradition to ebbing holds on authority during periods of cultural transformation.

Ventresca-Miller, Alicia (University of Michigan), Julia Clark (NOMAD Science), Jamsranjav Bayarsaikhan (Max Planck Institute for Geoanthropology), Peter Hommel (University of Liverpool) and Sosorbaram Khurelsukh (Mongolian Academy of Sciences)**[151]***Hearth Fatigue: Excavation of a Deeply Stratified Campsite from the Medieval Era in Northern Mongolia*

Until recently there were only a few examples of deeply stratified habitation sites in Mongolia. During survey, we located an erosional gully with several hearths, an ash lens, and cultural materials. Initial radiocarbon dates indicate that the site was occupied from 1000 to 1400 CE, spanning the pre-Mongol through Yuan dynasty eras. We returned to excavate Burgastain Am to understand the habitation history of the campsite. Test units reached a depth of 3 m, and we identified 11 hearths and a meter-thick ash layer. We also found evidence for discontinuous occupation of the site with pea gravel separating cultural layers. We are currently working through recovered materials including paleobotanicals, faunal remains, ceramics, sediments, and metals. The campsite is only a few kilometers from Erchuu Khot, a Mongol era palace or temple, and we are interested in understanding the relationship between these communities. The thick layer of ash at Burgastain Am might indicate that the site was intensively occupied for a short period or that it had a longer occupation. Future work will focus on understanding chronological variation in lifeways, subsistence practices, as well as ceramic technology and design.

Ventresca-Miller, Alicia [199] see Densel, Allison

Ventresca-Miller, Alicia [169] see Luurtsema, Anna

Ventresca-Miller, Alicia [286] see Tutak, Danielle

Vepretskii, Sergei (Institute of Ethnology and Anthropology, RAS) and Christophe Helmke (University of Copenhagen)**[159]***The Tumultuous Times: The Shifting Alliances of Caracol Monarchs in the Sixth and Seventh Centuries*

The most extensive historical record of Caracol was produced under the reign of Tutum Yohl K'inich Tz'uumt' II (formerly known as K'an II / Ruler V), who reigned from AD 618 to 658. In addition to outlining his life and deeds, as well as those of his father Yajawte' K'inich Tz'uumt' II (a.k.a. Lord Water / Ruler III; reigning from AD 553–593+), these texts provide a unique vantage on the historical events of the sixth and seventh centuries, outlining alliances, reversals and crushing military defeats—including that of Tikal in AD

562. In unparalleled detail, the same sources also narrate relations with the Kaanu'l royal house, and the schism that occurred between AD 630 and 642, resulting in the fissioning of the dynasty and the establishment of the new capital at Calakmul. Rather than passive observers of these historical highlights, a careful reading of the texts reveals the capricious character of the agents, acting out on alliances, resulting in rapidly shifting allegiances and antagonisms. Here we will outline this tumultuous century (AD 553–658) and track the shifting alliances of Caracol's monarchs, focusing specifically on what the texts do record and also what the texts are resolutely silent about.

Vepretskii, Sergei [159] see Beliaev, Dmitri

Verano, John (Tulane University)

[212]

Chair

Verano, John (Tulane University)

[212]

The Killing of Captives by the Moche of Northern Coastal Peru: Veneration or Violation?

Archaeological and bioarchaeological data and a rich iconographic tradition provide complementary perspectives on the taking and killing of captives by the Moche (ca. AD 200–900). While these practices clearly had important ritual aspects, there continues to be debate over the source of captives and their social identities (warfare or ritual combat; local elites or enemies) and the significance of such practices (ritual sacrifice or sanctioned killing; religious or political motivations) in Moche culture. While known best from excavations at major ceremonial centers such as the Pyramids of Moche, the killing of captives has been identified more recently at smaller centers in the Moche and other north coast valleys. Key elements for identifying sacrificed captives include their demographic profile (young adult males); ropes around the neck, wrists, or ankles; lethal perimortem injuries; and the context and manner of disposal of their remains. The latter includes denial of proper burial, commingling of bodies, dismemberment, mutilation, and other indications of disrespect for the victims. This presentation will focus on postmortem manipulation and disposal of bodies as a key element in interpreting these practices and distinguishing them from other forms of ritual sacrifice in ancient Peru.

Verano, John [212] see Parker, Glendon

Verano, John [212] see Sutter, Richard

Verano, John [212] see Witt, Rachel

Verde, Maria [121] see Czujko, Stephen

Verde, Maria [121] see Renson, Virginie

Verdonkschot, Jadranka [28] see Criado-Boado, Felipe

Verdugo, Cristina (University of California, Santa Cruz), James Brady (California State University, Los Angeles) and Lars Fehren-Schmitz (University of California, Santa Cruz)

[221]

Putting the Pieces Together: Paleogenomics and Bioarchaeology at Midnight Terror Cave

Since 2014, the Midnight Terror Cave (MTC) osteological assemblage has been subjected to archaeological, skeletal, isotopic, and paleogenomic analyses generating new insights regarding the use of the cave space as well as the individuals found within it. The thousands of human remains, animal bones, ceramics, and artifacts, have pushed us to consider Maya ritual and belief, in general, as well as its application within the cave itself. We have reexamined the role of women in ritual and sacrifice, age difference between sexes, and

postmortem mortuary practices. In this presentation, we synthesize the data to understand how the MTC population fits into the larger Maya landscape. Using genomic data obtained from 19 individuals from Midnight Terror Cave, Belize and Dos Pilas, Guatemala, we examine the population genomics of the human remains recovered from both caves as well as how they fit into the large landscape. Combining the results of this decade long interdisciplinary analysis, we now have a clearer picture for how MTC was used, how people moved through the space, and the implications for the study of human sacrifice.

Verdun, Renata [176] see Muro Ynoñán, Luis

Veres, Matthew (University of Georgia)

[319]

Chair

Veres, Matthew (University of Georgia), Suzanne Pilaar Birch (University of Georgia) and Robert Kelly (University of Wyoming)

[319]

Human Behavior and Environment: A Preliminary Zooarchaeological Investigation at the Alm Shelter Wyoming
The Alm Shelter in Wyoming lies in the foothills of the Bighorn Mountains, and its repeated use for 12,000 years provides a snapshot into human life throughout the Holocene. Moisture is a controlling factor in this (semi)arid environment. Mountains provided refuge and increased moisture access for humans, animals, and plants. This aridity also leads to poor bone preservation, adding import to this site through its addition to existing faunal and environmental data for the region. Faunal remains are used to investigate subsistence, mobility, and environmental reconstruction through stable isotope analyses, standard faunal analyses, and proteomics (zooarchaeology by mass spectrometry, ZooMS). $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ data allow for evaluation of faunal bone collagen preservation, while also providing data for vegetative landcover and aridity. The fauna will give insight into subsistence over time and whether hunting was done in the basin or on the mountain. Combined, the data can be used to explore relations between human behavior and the environment across the Holocene.

Vernon, Kenneth (Center for Collaborative Synthesis in Archaeology) and Scott Ortman (University of Colorado, Boulder)

[323]

The Socioecological Determinants of Community Centers

Community centers often play a dual role in archaeological contexts, as a civic space where individuals can participate in shared rituals and exchange and as a residential space connecting a large number of unrelated households. Given that these two roles are not perfectly coincident with each other, it is interesting to consider why community centers get established where and when they do. Is it more about local resource needs or the distribution of the wider community? We propose to investigate this question using a spatial network framework applied to data derived from cyberSW, in three regions across the US Southwest: central Mesa Verde, the northern Rio Grande, and the Cibola area. In particular, we explore how community centers evolved in or near dispersed farming communities by describing a dense network for each region, with edge weights defined by commute times and node attributes defined by hindcasted climate variables relevant to maize farming. We then compare environmental conditions in and near the locations of those centers to two measures of network centrality (closeness and betweenness), with a focus on how those changed over time. Our results can help inform on broader discussions in urban science and economic geography.

Vernon, Kenneth [20] see Baka, Abby

Vernon, Kenneth [198] see Medina, Ishmael

Vernon, Kenneth [107] see Wilson, Kurt

Veronese, Mauro [12] see Sorrentino, Giusi

Verostick, Kirsten [337] see Stantis, Chris

Veselka, Barbara (Vrije Universiteit Brussel), Tessi Loeffelman (Vrije Universiteit Brussel), Joris Brattinga (Archol bv), Guido Van den Eynde (Gemeente Tilburg) and Christophe Snoeck (Vrije Universiteit Brussel)

[334]

Mothers on the Move? Sex- and Age-Related Differences in $^{87}\text{Sr}/^{86}\text{Sr}$ in Late Bronze–Early Iron Age Tilburg-Udenhoutseweg, the Netherlands

The urnfield cemetery of Tilburg-Udenhoutseweg was excavated in 2020 yielding a total of 230 cremation graves dating to the Late Bronze-Iron Age. The cremation graves were distributed over the entire cemetery as part of burial monuments, in clusters, or as individual graves. Osteological analyses of all the cremation deposits demonstrated the presence of 234 individuals, of which 69 nonadults, 107 adults, and 58 indeterminate. Of the adults that allowed sex estimation, 21 were female and 27 male. More than 90% (106/109) of the individuals had $^{87}\text{Sr}/^{86}\text{Sr}$ that matched the range in and around Tilburg (0.7091–0.7126). Only three individuals had higher $^{87}\text{Sr}/^{86}\text{Sr}$ (0.7127; 0.7128; 0.7146). Interestingly, the highest $^{87}\text{Sr}/^{86}\text{Sr}$ were observed in nonadults (including two of the outliers). In addition, the mean $^{87}\text{Sr}/^{86}\text{Sr}$ of females (0.7107) is statistically significantly higher than the male mean (0.7099), showing an age- and sex-related difference in diet. Apart from nonadult G300 that had $^{87}\text{Sr}/^{86}\text{Sr}$ of 0.7146 which does not seem to be present in the Netherlands, large-scale long distance mobility cannot be inferred. However, the age- and sex-related difference in $^{87}\text{Sr}/^{86}\text{Sr}$ could be indicative of more localized mobility. This paper demonstrates the importance of high-resolution $^{87}\text{Sr}/^{86}\text{Sr}$ to reveal sociocultural patterns within past societies.

Veselka, Barbara [334] see Spros, Rachel

Vicencio, A. Gabriel (Boston University)

[248]

Chair

Vicencio, A. Gabriel [248] see Hernández Sariñana, Daniela

Vidal-Elgueta, Alejandra (Pontificia Universidad Católica de Chile)

[117]

Relatos de juncos y totoras en el Desierto de Atacama: Uso y significados en el Sitio Aragón I (3000 aC-1000 dC), región de Tarapacá, Norte de Chile

Desde el Perspectivismo amerindio se ha puesto énfasis en los mundos relacionales y las lógicas simétricas entre los humanos y no humanos. Sin embargo, desde este enfoque la arqueología ha dejado en un segundo plano la relación entre plantas y humanos. A partir del caso de estudio del sitio Aragón I (ca. 3000 aC-1000 dC), Desierto de Atacama, este trabajo tiene como objetivo estudiar y reflexionar sobre el uso, las injerencias y agencias de las plantas silvestres en contextos de cazadores recolectores del Arcaico tardío (ca. 5000-3000 aC) de la región de Tarapacá, norte de Chile. Los resultados indican un uso extensivo durante el periodo Arcaico de plantas de lechos de agua, tales como juncos y totoras. Particularmente, la especie *Schoenoplectus* sp., (juncos) fue recuperada extensamente en el registro, estando representada en todas sus partes (rizoma, tallos y flores) y con múltiples usos tales como rituales, alimenticios y artesanales, sugiriéndonos sus múltiples significados. En conclusión, se invita a reflexionar sobre las plantas y su presencia, no tan sólo como ecofactos inertes, sino como constructoras de las realidades cazadoras recolectoras desde sus usos y cualidades.

Vidal-Elgueta, Alejandra [77] see Uribe, Mauricio

Vidal Guzmán, Cuauhtémoc (George Washington University)

[210]

Persistence in Clay: A Thousand Years of Ceramic Traditions at Etlatongo in the Ñuu Savi Region

Archaeological research in the Nochixtlan Valley of the Ñuu Savi region has been stymied by the lack of useful ceramic chronologies when compared to other parts of Mesoamerica. Presently, only three phases cover the last 1,800 years of precontact occupation, which makes it difficult to make meaningful comparisons with neighboring regions. This has created the perception that development in the valley paralleled what transpired in other areas, or that there were long periods of social stability followed by moments of dramatic change. Recent excavations at Etlatongo have yielded significant ceramic collections that may help elucidate existent predicaments by making us to see ceramic traditions in a new light. Defined as learned and repeated practices that draw on embodied knowledge, traditions are actualized forms of making memory that transcend the inheritance of one's past. In this way, traditions articulate both continuity and change, through an array of different sociocultural practices. In this paper, I describe how ceramic traditions at Etlatongo contingently changed to interrogate whether our long chronological phases may correspond to persistent traditions.

Vidas, Lia (Institute for Anthropological Research, Zagreb, Croatia), Siniša Radovic (Institute for Quaternary Palaeontology and Geology), Sara Silvestrini (University of Bologna), Ivor Jankovic (Institute for Anthropological Research, Zagreb) and Rory Becker (Eastern Oregon University, La Grande)

[247]

Paleoproteomic Approach to Understanding Human Subsistence at the Late Upper Paleolithic Site of Ljubičeva Pecina (Istria, Croatia)

The region of Istria, today the largest Croatian peninsula, was a part of the Great Po region during the Late Pleistocene and therefore a big part of an intricate, now largely changed, ecosystem. The site of Ljubičeva pećina is one of many caves that played an important role for hunter-gatherer communities gravitating to this vast, and potentially fertile, plain. This rich site has a long stratigraphic sequence and, among other periods, bears evidence of human occupation at the very end of the Upper Paleolithic, approximately between 16 and 12 ka cal BP. Apart from traditional zooarchaeological analyses of the large faunal assemblage from trench B, a paleoproteomic approach to nondiagnostic osseous fragments is ongoing. Here we present the results of ZooMS analyses done so far in comparison to the available results of the morphological analyses. This gives us more data to get a better insight into behavioral patterns of these groups, such as planning, mobility and seasonality. Also, from a methodological point of view, we can assess how much and in what way the proteomic methods complement more traditional approach to faunal remains and, through estimation of collagen preservation, how they can be used in planning for further biomolecular analyses.

Vidas, Lia [247] see Ahern, James

Vidrine, Maria and Nicholas Laluk (University of California, Berkeley)

[331]

Building on Basso: Ndee Place-Making as Cultural Persistence and Survivance

Ndee place-based understandings of the past, present, and future are ageless and enduring. In his book *Wisdom Sits in Places* (1996) Keith Basso explains the moral and social underpinnings of Ndee ties to place through topography and storytelling. However, in reference to present and future intersections with Ndee worldview how do we build on Basso's seminal work contemporaneously? Are there ongoing forms of Ndee placemaking that are expressed through current cultural preservation and maintenance activities? How do persistent places speak to the contemporary wants and needs of Indigenous communities? How might past and present agricultural practices and exertions of food sovereignty evoke senses of place important to

concerns of climate change and overall Ndee identity? Heavily researched and extracted Ancestral Pueblo areas within the Ndee landscape provide ongoing intergenerational connections that speak to broad present-day tribal issues beyond archaeological research goals. This paper attempts to foreground place through the powerful lenses of Ndee place-based realities grounded in a multitude of “persistent relationalities” that speak to essence of Ndee life and what is needed to maintain such connections in perpetuity for overall Ndee well-being.

Vieri, Jasmine (University of Cambridge), Enrico Crema (University of Cambridge), Agnese Benzonelli (University of Cambridge), Juanita Sáenz Samper (Museo del Oro, Banco de la República) and Marcos Martín-Torres (University of Cambridge)

[118]

Internal Networks and the Materiality of Imported Gold in the Eastern Cordillera of Colombia (AD 600–1600)

The Muisca of the Eastern Cordillera of Colombia are known for making extensive use of imported gold to manufacture both votive metalwork and body ornamentation over a millennium. To better understand the materiality of this imported raw material, we present new computational models of the compositional datasets pertaining to Muisca metal assemblages and propose that the chemical signatures of the votive offerings reflect contributions of gold from people converging into specific locations for festivities. In turn, we argue that the symbolic value of gold among the Muisca was often based on processes and raw material movements at the intraregional scales, taking place after its introduction from foreign sources. We finally zoom into the contextual scale, presenting new data on votive assemblages from the archaeological site of Divino Niño, Sopó: here, elemental and technological analyses demonstrate the combination of multiple manufacturing hands and gold compositions in a single ritual context. While the dynamics of internal exchange networks are undoubtedly more difficult to reconstruct, our results highlight that the symbolic value of metals or other imported materials should not be assumed to be a priori or primarily placed on their value as foreign luxury goods, whether within the Isthmo-Colombian region or elsewhere.

Vílchez, Carolina Maria [161] see Moore, Jerry

Vilchis Zapata, Kay [321] see Rissolo, Dominique

Villalobos Pérez, Alejandro [32] see Williams-Beck, Lorraine

Villalpando, Elisa [75] see Carpenter, John

Villalpando, Elisa [75] see Sanchez Miranda, Guadalupe

Villanea, Fernando [200] see Buckser, Sarah

Villanueva, Juan Pablo [161] see Seki, Yuji

Villar Quintana, Anthony

[161]

Las redes de interacción interregional a larga distancia entre los Andes Centrales y Septentrionales durante el 3° y 2° milenio aC: Una perspectiva desde Shoymal (Amazonas-Perú)

Las excavaciones arqueológicas sistemáticas realizadas en Shoymal (Amazona-Perú) nos permitieron identificar un edificio volumétrico construido entre fines del 3° e inicios del 2° milenio aC (2300-1800)

aprox.), mediante el uso de grandes bloques líticos finamente tallados. Muchos de esos sillares contienen grabados en alto relieve con distintas representaciones, las cuales son similares a otras plasmadas sobre distintos soportes en sitios contemporáneos como La Galgada, Huaca Prieta, Santa Ana La Florida, Jaiva, Buenavista, Cerro Ventarrón, etc. Dichas similitudes evidencian la existencia de contactos interregionales, relacionados en gran parte a aspectos cosmológicos, en un área que abarcó parte de los Andes Centrales y Septentrionales, incluyendo a la Costa y la Amazonia. Durante dicho momento, este edificio correspondió a un centro ceremonial, asociado a un contexto funerario y ofrendas. Asimismo, en un periodo posterior que abarcó gran parte del 2° milenio aC (1800-1200 aprox.) se construyeron nuevos edificios y se caracterizó por el uso de vasijas cerámicas similares a las identificadas en sitios como Huacaloma, Montegrande, Pandanche y Manachaqui. Durante este periodo el edificio volumétrico fue cubierto paulatinamente con depósitos que contenían gran cantidad de cerámica, lo cual evidencia una pérdida del prestigio de este frente a nuevos edificios.

Villasenor Iribé, Eunice (Arizona State University), Dean Blumenfeld (Arizona State University) and Christopher Morehart (Arizona State University)

[281]

Historic and Ancient Terrace Use at the Hacienda Rincon de Guadalupe

This poster presents the findings for the first season of an archaeological dissertation project investigating changing land use at the Hacienda del Rincon de Guadalupe in Apaxco, Mexico. The hacienda is located within the Sierra Tezontlapan, bordering the states of Mexico and Hidalgo. It was constructed during the late eighteenth century, but there is evidence of significant early colonial, and even prehispanic, occupation of the area. Occupation of such an inclined and uneven area was facilitated by the use of terracing that served various residential, agricultural, and ecological functions. One of the goals of this project is to identify how terrace use and function changed in response to chronological and spatial positioning. Work conducted this summer included surface collections, mapping, and shovel testing for targeted areas in the terraced foothills surrounding the Hacienda center. We found that terraces further from the hacienda center were likely used at an earlier period in time and those at lower elevations are more likely to have been used for primarily agricultural purposes. Future work at this site will expand on these findings and will determine how construction methods were impacted by chronological and spatial factors.

Villasenor Iribé, Eunice [102] see Ptacek, Alexandra

Villasenor Iribé, Eunice [174] see Blumenfeld, Dean

Villella, Catherine (Chronicle Heritage)

[108]

Exploration and Evaluation of an Ash Pit at AZ T:12:137(ASM)/Las Canopas, Phoenix, Arizona

This poster will delve into the findings from an ambiguous ash pit discovered during Chronicle Heritage's recent excavations at AZ T:12:137(ASM)/Las Canopas, a prehistoric habitation site broadly occupied between AD 650 and 1450 in Phoenix, Arizona. The artifact assemblage, temporal and cultural affiliation, and discrepancies in determining use-history will be presented. The scientific goal is three-part: revisit resource procurement and specialized craft production theories, examine inconsistencies, and determine the feature's main function at the site. Artifact ornamentation and decorative styles attributed to the feature will be cross-referenced with contemporaneous habitation sites within the American Southwest to assess cultural identity and open discussion over established trade routes.

Vining, Benjamin (University of Arkansas, Fayetteville), Daniel Contreras (University of Florida), Augusto Bazan (Museo del Complejo Arqueológico el Brujo), Kurt Wilson (University of Utah) and Cesca Craig (University of Arkansas, Fayetteville)

[242]

Just Add Water: ENSO-Driven Ephemeral Agricultural Systems in the Arid Chaupiyungas of Peru's North Coast

Abrupt climatic changes caused by El Niño Southern Oscillation (ENSO) bring profound ecological transformations to the Andean Pacific coast. Archaeological research has largely focused on the impacts (which have been shown to be largely negative) of ENSO-positive phases, or “El Niños,” on complex socioecological systems in coastal lowlands. This focus has recently broadened, exploring how ENSO impacts agroecological environments of the inland chaupiyunga zone, where El Niños cause significant amounts of precipitation in an arid environment. We document ephemeral irrigation-agricultural systems and ENSO-driven changes in productivity within the chaupiyunga. These systems draw surface water from channels that are not hydrologically connected to highland sources, but which derive moisture from El Niño-derived precipitation falling directly in the vicinity. We present information on labor requirements and productive potential of these systems. Associated archaeological finds suggest these systems were used as early as the Chimú and perhaps Moche periods and had intermittent use into recent times. These fields suggest ways in which some of the adverse impacts of El Niño events could be offset by strategies tailored to the hydroclimatic dynamics of ENSO. This findings are highly relevant, as anthropogenic climate change is predicted to increase the frequency and severity of ENSO dynamics.

Violante, Nicoletta [116] see Tykot, Robert

Visaggi, Christy [329] see Rich, Megan

Viswanathan, Anisha

[329]

Land Use and Change at the National Cemetery

Created in 1866, Vicksburg National Cemetery is perhaps most famous as being the final resting place for the 17,000 Union soldiers who participated in the Civil War. The importance of the cemetery, however, extends far beyond its designated period of historical significance. Archaeological evidence has revealed the presence of artifacts from a myriad of different time periods, from prehistoric to modern day, indicating that the use of Vicksburg National Cemetery extends far beyond being a place of commencement by those who have visited, occupied, and shaped the landscape that is now part of the National Park Service. This paper explores the various ways that the use of the land that makes up the National Cemetery has changed throughout time and how even after the cemetery was erected, the landscape was utilized for various other purposes other than mourning and revelry.

Vivero Miranda, Jose

[69]

El Ombligo Burial Mound and Its Material Networks

Guasave, Sinaloa, has historically been identified as representing the northern Mesoamerican frontier based on the presence of Aztatlán culture tradition materials dating to circa AD 1150. To explain the purported Mesoamerican affiliation, researchers in the region have deployed hypotheses focusing on economic and ideological connections between the highlands of central Mexico and the US Southwest. El Ombligo burial mound funerary assemblages are the basis for all such discussions since the 1930s; however, we know very little about the social structure of local prehispanic populations. This poster presents a social networks analysis on the funerary assemblage of the El Ombligo site. The results of this research focus on parsing the number and heterogeneity of social roles in this community but also intersect with discussions of inequality, relations of power, and the emergence of new sodalities/identities in northern Sinaloa during the purported Mesoamericanization of northern Mexico.

Vogel-Teeter, Lindsey (Pueblo Grande Museum), Laurene Montero (S'edav Va'aki Museum) and Nicole Armstrong-Best (S'edav Va'aki Museum)

[102]

Creative Clearance: Caring for an Important Place

S'edav Va'aki (formerly known as Pueblo Grande) is an ancestral O'odham (Hohokam) archaeological village site and Phoenix's only National Historic Landmark. Most of the site is preserved and maintained by S'edav Va'aki Museum (Museum) and includes a publicly accessible trail and non-public preserves. Hidden by trees and desert grasses and surrounded by fences, there remain areas of myriad surface artifacts and features, reflecting occupation from prehistoric to historical times. The Museum protects this land from illegal dumping, collecting, and other disturbances, a difficult task in the heart of an urban metropolis. Struggling for decades with managing these modern intrusions in a sensitive area called "Trashmound I," it was determined that non-excavation professional documentation was necessary. Through conversations with Arizona State University (ASU) School for Human Evolution and Social Change the team developed a mutually beneficial, nondestructive a field school in this location. The Museum and ASU collaborated with Tribes to develop a program in which students learned in-field artifact analyses, GIS mapping, archival research, and the importance of working in concert with descendant O'odham communities. The Museum benefited with sensitive areas clearly documented for protection and wealth of new information on an area that was not well understood.

Vogel-Teeter, Lindsey [88] see Montero, Laurene

Vokhshoori, Natasha [304] see Rick, Torben

Vokotopoulos, Leonidas [113] see Fallu, Daniel

Voltaire, Mikael (Queens College) and Timothy Pugh (Queens College)

[110]

Recent Research in an E-Group (Group AA) at Nixtun-Ch'ich', Guatemala

E-Groups in the Maya world are believed to have had ritual purposes, serving as meeting centers where political meetings or markets may have taken place. They are also believed to have celebrated solar cycles. At Nixtun-Ch'ich' three or four E-Groups are aligned on the site's east-west axis. Our excavation in one of the E-Groups (Group AA) found that it contained construction phases from the Middle and Late Preclassic periods. This group is in the central part of the site and was accessed by two avenues that we believe were site entrances. The exact uses of these building groups are debated, but the buildings' east-west axial alignment suggests that the structures could be used as astronomical observatories marking dates throughout the year as well as having astronomical references applied to its very architectural design, standing as a monumental representation of time. Water pools yearly on the eastern side of Group AA, suggesting that it was also tied to cycles of rain—the rainy season.

Von Scherrer, Erin (Florida State University)

[227]

Buried Lives: An Archaeological Investigation of a Louisiana Plantation Midden

This paper delves into an in-depth archaeological investigation of the Evergreen Plantation Slave Quarters (16SJ B63) in southern Louisiana. Ground-penetrating radar (GPR) data analysis and subsequent excavation endeavors centered around units adjoining Cabin I uncover a vivid narrative. The exploration of Test Units 15, 18, 20, 21, and 25 reveals discrepancies between GPR indications and actual excavation depths, fostering a reevaluation of the site's historical timeline. The paper not only presents a meticulous analysis of the excavated artifacts but also situates these findings within the broader context of plantation archaeology in southern Louisiana. Moreover, this paper adopts a humanistic perspective, amplifying the voices of the

enslaved and their descendants who have been underrepresented in historical narratives. Through creative interpretation, the study provides a platform for the marginalized, offering a richer understanding of their experiences within the plantation setting. Ultimately, this paper seeks to reconstruct the buried lives of Evergreen's past inhabitants, contributing to a more authentic portrayal of plantation life and history. By illuminating the complexities of this historical site, this research strives to create a deeper connection between present and past, bridging gaps in understanding and fostering a more inclusive appreciation of the human experience.

Vranich, Alexei (University of Warsaw), Katheryn Killackey (Independent Researcher), Andrew Roddick (Macmaster University) and Erik Marsh (CONICET)
[248]

Visualizing the Origins of Monumentality: The Case of Tiwanaku, Bolivia

Archaeologists examining early urban formations in the Andean Lake Titicaca basin have recently framed them as early “proto-urban” centers. In this paper, we reflect on our current understanding of the region’s proto-urbanism by deploying visualization methodologies to synthesize the evidence for Late Formative occupation at Tiwanaku (AD 200–600). While excavations and reconstructions conducted in the 1950s and 1960s concentrated on the later remains and froze the site as a timeless state capital, a number of under-analyzed archives are helping us to “unflatten” the emergent urban center into various periods of development. In addition, scholars have recently used increasingly precise radiocarbon dates to tease apart what made such social and political formations unique, from their seasonality, trade interactions, visibility of material culture, and extended kin networks. Our work at Tiwanaku and other sites in the region, such as Khonkho Wankane, is shifting our visions of the ancient altiplano, demanding new ways of seeing these early centers. We discuss some of the results from this ongoing effort.

Vranich, Alexei [199] see Eslinger, Emmalee

Vrydaghs, Luc (AMGC-Vrije Universiteit Brussel), Alexander Chevalier (Royal Belgian Institute of Natural Sciences) and Yannick Devos (AMGC-Vrije Universiteit Brussel)
[288]

To Be or Not to Be Attributed to Specific Plants? The Integration of Phytolith Analysis and Soil and Sediment Micromorphology

Despite extensive research during the last decades, phytolith botanical attribution remains a critical issue. Nevertheless, the development and expansion of reference collections confirm that some taxa produce very distinctive phytoliths at different taxonomic levels. Things become more complex when considering closely related taxa. Phytoliths found in domesticated taxa deriving from wild relatives provide one of the best illustrations of this phenomena. Indeed, such taxa, especially at the species level, typically produce phytoliths of similar shapes and types difficult to distinguish from each other. In such cases, morphometric analyses (measurements of size and shape) may allow us to discriminate taxonomically closely related species. However, the application of morphometric criteria is not straightforward, especially for archaeological contexts. Not only large samples of similar phytolith types are needed, but the phytoliths from an archaeological context should all originate from a single taxon and plant part. So far, only some primary archaeological contexts, such as ceramic jar contents, provide such conditions. By focusing on one cereal phytolith known as ELONGATE DENTATE/DENDRITIC, we are highlighting in this presentation how some of these issues can be overcome by the development of reference collections and the integration of phytolith analysis with soil and sediment micromorphology.

Wadley, Lyn [225] see Moll, Rosa

Wagner, Katherine (Colonial Williamsburg Foundation) and Aaron Lovejoy (Colonial Williamsburg Foundation)

[16]

Let Them Rest in Peace: Cemetery Analysis of Unexcavated Graves at the First Baptist Church

Excavations at the First Baptist Church in Williamsburg, VA, revealed 62 burials on the west half of the lot behind the early nineteenth-century church. While three burials were chosen by the descendant community to be excavated, they also elected to leave the remaining 59 burials undisturbed, with the understanding that the Colonial Williamsburg Foundation would protect the area from development. While much information can be gained from excavating burials, this paper seeks to explore the wide extent of data that can be recovered from the unexcavated burials, including spatial analysis, artifact associations, and demographics. This analysis is further assisted by comparative examples of previously excavated Black and/or Christian cemeteries, which did not have the option of remaining undisturbed. ***Images of human remains may be shown in this presentation.

Wagner, Mark, George Hunt (Southern Illinois University, Carbondale) and Rebecca Ramey (Southern Illinois University, Carbondale)

[153]

Resurrecting Kaskaskia: A GIS and Archival investigation of the Multiethnic Town of Kaskaskia, Illinois

Kaskaskia, Illinois, was established in 1702 as a Jesuit mission to the Kaskaskia. Through time it expanded into a large multiethnic fur trading and farming community that served as the gateway for the entrance of African slaves into Illinois. By the 1750s almost half of the town's population consisted of African peoples making it Illinois's largest African Diaspora site. Other residents included French, métis, creole, and Native American peoples. Heavily damaged by the Mississippi River in 1881, Kaskaskia declined over time until it today consists almost entirely of agricultural fields. The disappearance of the above ground structures has led to the widespread perception that Kaskaskia has been completely destroyed. However, by overlaying archival eighteenth- and nineteenth-century maps over the modern landscape we demonstrate that large sections of the town potentially still exist as archaeological sites. Among these are house sites identified on an 1830s map as the homes of African American and métis residents. We are now in the process of confirming the locations of these house sites through land owner, archaeological survey, and potentially remote sensing and test excavations as well as conducting research into records contained in the Jesuit Archives regarding their involvement with slavery in Kaskaskia.

Wai, Christopher (University of Toronto), Stefanie Wai (University of Toronto) and Patricia Quiñonez (Independent)

[76]

From Mountain Worship to Guarding the Sacred Lakes: Surveys of Cerro Cañoncillo, Cerro Prieto Espinal, and Cerro Santonte

At the heart of the community, Cerro Cañoncillo and its lakes formed enduring sacred spaces across the landscape. In this paper, we explore in greater depth how the ceremonial centers of the region interrelated spatially and symbolically with neighboring mountains and lakes that were likely venerated as *wak'as*. Combining survey data and visibility analyses, we argue that Cañoncillo secured a unique and privileged place in the sacred landscape of the valley, but one that became increasingly secured and isolated away by the Late Intermediate period (1000–1470 CE) with the replacement of Huaca Colorada-Tecapa by Huaca Dos Cruces. Although Jequetepeque was predominately a landscape of fortified mountainsides during the Middle Horizon–Late Intermediate period (650–1472 CE), Cerro Cañoncillo lacked these features. Meanwhile, the heavily defended mountains of Cerro Prieto Espinal and Santonte guarded both this mountain and the lakeside oasis which lies between them. Cerro Prieto Espinal (~500–1500s CE) shows a pattern of mountainside worship that cleaved close to the mountain exclusively with north- and west-facing platforms and walls facing Talambo and Cajamarca. At Santonte, a south wall dating to the LIP highlighted an isolated south-north route from the now abandoned Huaca Colorada-Tecapa to the Cañoncillo lakes flanked by the three mountains.

Wai, Christopher [98] see Wai, Stefanie

Wai, Stefanie (University of Toronto), Christopher Wai (University of Toronto) and Mel Campbell (University of Toronto)
[98]

The Afterlife of Pacatnamu: From Looting to Curanderismo

Site destruction from looting, climate change, agricultural activities, and urban development threatens the preservation of cultural heritage more than ever before, particularly due to a lack of site monitoring in some regions during the pandemic. This has long been the case in the North Coast region of Peru since the Spanish conquest. A significant amount of this ongoing destruction is brought about by looters, fueled by the global illicit antiquities trade, economic instability, political climate, and local curandero activity. The prehispanic city of Pacatnamu, dating to the Moche, Lambayeque, and Chimú periods (CE 600–1475), presents a significant example of the ongoing threats to this region. While it is a massive 3 km wide city of adobe mounds and plazas, its size and remote location have defied organized conservation. Some efforts have been made to help preserve Pacatnamu from erosional destruction. However, parts of the site have been destroyed by road construction and continue to be a target for intensive looting. Our research documents some key changes and alterations to the site from modern looting and ritual practices, including new clusters of pits with scatters of human remains, curandero dolls placed on huacas, and bags of coca leaves placed within pits.

Wai, Stefanie [30] see Gonzalez-La Rosa, Luis Manuel

Wai, Stefanie [76] see Wai, Christopher

Wait, Gerry [267] see Douglas, Diane

Wake, Thomas (Cotsen Institute of Archaeology at UCLA)
[304]

Bone Tool Production and Use in Southern Coastal California: Examining a Process that Demanded the Use of Large Terrestrial Mammal Tool-Quality Raw Material

Fragmented bits of worked bone are relatively common in coastal California habitation refuse—or shell middens. I examine collections of worked bone from various mainland and Channel Island archaeological sites with a focus on understanding the role of functional, as opposed to decorative, bone artifacts from the region. I seek to understand what was necessary to the production and use of bone barbs and other osseous artifacts from the region with an emphasis on *chaîne opératoire* and the role of functional bone artifacts in California coastal subsistence economies.

Walden, John (Harvard University)
[74]

Moderator

Walden, John (Harvard University), Antonio Beardall (Texas State University), Frank Tzib (Aj Tz'ib), Christina Warinner (Harvard University) and Jaime Awe (Northern Arizona University)
[98]

Forging International Archaeological Research Collaborations and Mentorship Opportunities at Lower Dover, Belize

Our poster presents ongoing efforts at creating a collaborative research environment between international and Belizean early career scholars at the Classic Maya center of Lower Dover, Belize. Rather than incorporating Belizean collaborators in preexisting research projects, our current goal has been to collaborate with Belizean early career scholars to fashion their own research projects based on their interests and those of other local community members and stakeholders. This approach has long been advocated for among scholars engaged in community archaeology and truly has the power to create two-way

flow of knowledge and decolonize archaeology at its core. We present on several collaborative research projects including a comparative investigation of Late Classic elite households, survey and analysis of a historic period logging camp, and osteological study of commoner and elite well-being. The poster showcases our approach, outlines hurdles we have encountered, and concludes with our future plans.

Walden, John [295] see Freiwald, Carolyn

Walden, John [226] see Martinez, April

Walden, John [266] see Suarez, Nicholas

Walden, John [34] see Tzib, Frank

Walder, Heather [86] see Hawkins, Alicia

Walhovd, Anastasia

[136]

Mapping Indigenous Laborers at the Pageant Tavern and Hotel on the Red Cliff Reservation on Lake Superior, Wisconsin, USA.

The Pageant Tavern and Hotel operated during the 1920s and 1930s on the Red Cliff Band of Lake Superior Chippewa Reservation in Northern Wisconsin. The Pageant Tavern was owned by non-Native and nonlocal businessmen, but the hotel staff and caretakers were Indigenous (Ojibwe) residents of Red Cliff. A recorded interview indicates the staff lived at or near the hotel, but little else has been documented about their experience. Targeted archaeological survey near the hotel in 2023 identified middens related to domestic activity in the area which were likely created or used by the Ojibwe staff. The paper describes the results of this survey, which offers new insights into the lived experiences of Ojibwe workers during the decline of the logging era and the emergence of tourism industry in Northern Wisconsin.

Walker, Cam (University of Wyoming)

[139]

Orbiting the Oasis: Protein Residue Analysis Illuminates Past Interspecies Interactions in Jordan

Lithic tools excavated at Shishan Marsh (SM-1) dating to approximately 250,000 years have provided insight into human adaptability to the factors of climate change, water shortage, and ecological stress. Shishan Marsh was likely a refuge due to being a wetland in the middle of a desert, the paleommarsh setting episodically expanding into a lake. This attracted ancient humans, and wildlife no longer regionally extant, such as elephant, ostrich, rhinoceros, lion, and hippopotamus. Protein residue analysis, including the production of custom antisera, was instrumental in helping to investigate the interplay between humans, animals, plants, and water over time from the Pleistocene era into modernity. An overview of findings, methods, and potential for protein residue analysis to contribute to broad-based studies of this type will be discussed.

Walker, Chet [326] see Wurtz Penton, Michelle

Walker, Danny [177] see Becker, Rory

Walker, Debra (Florida Museum of Natural History)

[78]

Pottery Traditions and Cultural Resilience: The Evidence from Yaxnohcah

A decade of research at Yaxnohcah informs our current understanding the Central Karstic Uplands and lays the groundwork for continuing research in the greater Bajo el Laberinto region. This paper summarizes the sometimes surprising results of ceramic analysis at the site, while acknowledging the limitations of single-site

strategies. Yaxnohcah was especially important during the Preclassic period, with early residents modifying the landscape and developing a local ceramic industry at about 900 BCE. By 600 BCE, Yaxnohcah potters had adopted the new waxy slips of a long-lived tradition that spanned the entire Maya region. Yaxnohcah thrived throughout the Preclassic but was overshadowed by Calakmul's rise during the Early Classic. Always resilient, Yaxnohcah housed a substantial Classic-era population and remained a home to some in the Terminal Classic and Postclassic periods. Pottery evidence for the waxing and waning of Yaxnohcah's neighborhoods across time provides a baseline for studying population dynamics in the greater Bajo el Laberinto region.

Walker, Debra [251] see Aimers, Jim

Walker, Debra [78] see Kupprat, Felix

Walker, Debra [78] see Lockett-Harris, Joshuah

Walker, John (University of Central Florida)

[155]

Quilts and Palimpsests: Intensive Agricultural Landscapes in the Llanos de Moxos

The Llanos de Moxos (Moxos) in the Bolivian Amazon is a useful case study for questions of settlement pattern, agricultural intensification, and social organization, particularly in light of its ambiguous status as both Amazonian and Andean, and neither Andean nor Amazonian. Moxos contains at least seven distinct examples of large landscape patterns of varying density, as measured by mapping forest islands, ring ditches, monumental mounds, causeways, zigzag features, fish weirs, raised fields, drained fields, mound fields, and domesticated wetlands. Comparisons within this set of related but distinct landscapes suggest that precolumbian communities organized their daily activities in a variety of ways, always in a context of marked seasonality. Recent research suggests that this variety of landscapes may have existed as early as 1700 BCE and persisted into the Jesuit period (ca. 1665–1767 CE).

Walker, John [67] see Whelton, Kathryn

Walker, Robert [283] see Ferguson, Jeffrey

Walker, William (New Mexico State University)

[297]

Animate Pottery and Culture Phases

If pottery was animate in past cultures, does this not beg the question how would these powers, central to magical technologies, contribute to creation of archaeological phases? Archaeologists generally struggle to explain rise and fall in the popularity of artifacts. Indeed, the behavioral archaeologists developed artifact performance characteristic models in order to render such problems as comparisons of technologies underlying these assemblages. If we can incorporate artifact animacy into such behavioral archaeology models, then we can begin to address the role ritual technologies play in the formation of artifacts assemblages. In this paper I review how animacy contributes to ceramic technologies among Native peoples of the American Southwest and then translate these data into behavioral models of artifact performance. I then apply these models to a case study of Jornada Mogollon phases in southern New Mexico between AD 750 and 1450.

Walker, William [52] see Berryman, Judy

Wall, Harper (Vancouver Island University)

[268]

Bog Butter: Experimenting with the Preservative Nature of Peat Bogs

The anaerobic and highly acidic nature of peat bogs produces a perfect environment for preservation. Biological material that would usually decay, such as human tissue, is kept stagnant, unable to decompose thus

allowing for preserved individuals and items to be discovered. Peat bogs located in both modern-day Ireland and Scotland have produced an unusual type of artifact, Bog Butter. The butter, found in various types of containers, can be dated ranging from the early Bronze Age to the Early Modern period in Europe. To explore the meaning and purpose of Bog Butter deposits and peat preservation, a small peat bog was built to emulate the environment of northwestern Europe to closely study the production and preservation of Bog Butter. An exploration into the purpose of butter deposits in peat bogs could indicate the potential votive and religious, food storage, or flavor-enhancing purpose of this phenomenon. The intention of this experiment is to foster more understanding of the lifeways of the ancient Gaelic and Celtic peoples. By experimenting with the preservative qualities of a Peat Bog, the purpose, and cultural connotations of those who deposited the Bog Butter could become clearer, thus providing cultural context for people of the past.

Wallace, Birgitta [307] see Pinta, Elie

Wallén, Henri [151] see Salmi, Anna-Kaisa

Waller, Joseph (Jay), Jr. (PAL)

[187]

Where Power, Policy, and Practice Intersect: Archaeology within Block Island's Great Salt Pond Archaeological District

The Block Island Wind Farm, the nation's first offshore wind project, was the first in a series of significant renewable energy projects proposed along the southern New England coast. At only five wind turbines, the project served as a unique pilot study that required balancing federal policy, tribal concerns, historic preservation, and archaeological research with the nation's desire to reduce its overall carbon emissions. This presentation will discuss the project, which with the assistance of the Narragansett and Wampanoag Indian Tribal Nations, led to the discovery of the significant Harbor Pond precontact Native American archaeological site and the partial archaeological study of a substantial Late Archaic (5000–3000 BP) archaeological component on Rhode Island's largest offshore island.

Walling, Stanley (Community College of Philadelphia), Christine Taylor (Rio Bravo Archaeological Survey) and Shawna Veach (Google Corporation)

[213]

Commoner Agency, Hinterland Complexity, and Evidence for a Late Classic Commoner Marketplace in the Rio Bravo Basin, Northwestern Belize

This paper considers preliminary evidence for a Late Classic period marketplace at the site of Chawak But'o'ob, Belize. Group E, one of the largest settlement groups at this eighth-century agrarian site, is characterized by a well-bounded, spacious plaza that is larger and otherwise unlike any other public space at the site. This and other evidence for a marketplace will be discussed in the context of commoner complexity in the region.

Wallis, Lynley [42] see Huntley, Jillian

Wallis, Neill (Florida Museum of Natural History) and James Dunbar (Aucilla Research Institute Inc.)

[232]

Wooden Post Architecture and the Origins of Woodland Civic-Ceremonial Centers: New Evidence from the Spring Warrior Complex, Florida

Civic-ceremonial centers first emerged in the American Southeast near the Gulf of Mexico ca. AD 200–400 and served a dual purpose as home to resident villagers and as a place of ceremonial gatherings featuring

feasts, mortuary rituals, and mound construction. Over the past decade, archaeologists have learned that some of these sites began as “vacant” ceremonial centers that lacked residential populations and featured cemeteries and wooden structures at the future locations of mounds. This presentation will review features associated with wooden structures that preceded mound construction and village settlement at several sites in the Big Bend region of Florida and will highlight results of recent excavations at the Spring Warrior Complex (8TA154). Documentation of 13 posthole features near the platform mound at Spring Warrior revealed a portion of a large fourth-century CE structure that included several exceptionally deep posts and oyster shell chinking evidently used for structural support. By comparing these attributes to other Woodland buildings, we ascertain possible structure functions and consider their relevance to the origins of civic-ceremonial centers.

Wallis, Neill [287] see Cordell, Ann

Wallis, Neill [287] see Duke, C. Trevor

Wallis, Neill [287] see Farace, Anthony

Wallis, Neill [318] see Green, Jennifer

Wallis, Neill [279] see Nelson, Erin

Wallis, Neill [287] see Rutkoski, Ashley

Wallis, Neill [72] see Smith, Catherine

Walraven, Ian (Western Michigan University)

[41]

Spatial Analysis of Glass at Fort St. Joseph

Throughout the seventeenth and eighteenth centuries, alcohol was traded and consumed by both Europeans and their Native American neighbors. While historic documents relay the cultural and trade uses of alcohol, archaeological investigations have begun to compare the amount of glass found with the historical reports. The amount of olive green and dark blue bottle glass found at Fort St. Joseph, a French trade outpost in the Great Lakes region, is only a fraction of the material culture recovered. By using spatial analysis and careful examination I hope to gain further insights to the trade and consumption of alcohol at this eighteenth-century mission, garrison, and trade outpost.

Walsh, Justin (Chapman University)

[207]

Chair

Walsh, Justin (Chapman University), Shawn Graham (Carleton University) and Alice Gorman (Flinders University)

[207]

New Insights from Archaeology into Life in Space: The Sampling Quadrangle Assemblages Research Experiment (SQuARE) on the International Space Station

From January to March 2022, astronauts aboard the International Space Station (ISS) carried out the first documentation of in situ material culture from a space habitat. Since then, we have identified and marked the locations of thousands of artifacts in the 358 photographs made by the crew in six sample locations across the ISS. At the 2023 SAA meeting, we presented our methodology and some preliminary, anecdotal observations from the SQuARE experiment. In this paper, we will present data, statistical analysis, and spatial analysis of the sample areas that allows for a re-assessment of ISS spaces and their functions based on their material culture. In this way, we demonstrate the validity of our methodology, while also generating actionable insights for designers and mission planners of future space habitats (who rarely have access to forensic analysis of previous ones).

Walsh, Kevin [113] see Brown, Antony

Walsh, Mary-Ellen

[144]

Moderator

Walsh, Matthew, Anna Prentiss (University of Montana) and Megan Denis (University of Montana)

[308]

Cultural Macroevolution in the Upper Pleistocene and Holocene of Eastern Siberia and Western North America
Geneticists have used phylogenetic analyses to model population movements associated with emergence and movements of distinct populations in northeast Siberia and the Americas. However, archaeologists have rarely taken advantage of this approach to examine the emergence and radiation of cultural traditions in these regions. In this paper, we draw on a cultural macroevolutionary perspective to model long-term evolutionary processes across Siberia and western North America during the Upper Pleistocene and Holocene. More specifically, we rely on multiple phylogenetic approaches to model cultural evolutionary processes related to lithic technological systems associated with hunter-gatherer-fisher groups over the long term in these regions. We test a number of long-standing hypotheses concerning evolution and spread of widely recognized technological traditions identified by archaeologists as: Dyuktai/Denali, Nenana/Berelekh, Western-Stemmed, Old Cordilleran, Nesikep, Clovis/Folsom/Northern Paleoindian, Plains/Northern/Shield Archaic, Arctic Small Tool, and Thule cultural complexes. We apply a Bayesian phylogenetics approach to a dataset representing thousands of years of cultural evolution and change, allowing us to examine the probability of different phylogenetic relationships while substantially avoiding issues of underdetermination. Thus, we offer insights into a range of discussions associated with peopling of the Americas and subsequent cultural evolutionary process.

Walsh, Matthew [304] see Prentiss, Anna

Walsh, Megan [241] see Cerezo-Román, Jessica

Wande, Claudio (Universidad de Chile), Diego Mayorga (Pontificia Universidad Católica), Mauricio Uribe (Universidad de Chile), Pablo Méndez-Quirós (Arqueólogos de Chile) and Francisca Santana Sagredo (Pontificia Universidad Católica)

[223]

Historias de pukaras: Trayectorias locales y diversidad en dos asentamientos de la precordillera del Desierto de Atacama durante el Período Intermedio Tardío y Tardío (900-1532 dC)

Abordamos el fenómeno de los pukara durante los períodos Intermedio Tardío y Tardío (900-1532 dC) en la región de Tarapacá del Norte Grande de Chile, a partir del registro arquitectónico y cerámico de dos pukara ubicados en una misma localidad en la precordillera del Desierto de Atacama. Estos asentamientos muestran usos y formas de habitar con intensidades y orientaciones diferenciadas. Con esto, se busca contribuir con un abordaje crítico, sustantivo y comprensivo de las sociedades prehispánicas tardías de las tierras altas, enmarcado en los debates arqueológicos sobre los órdenes sociales preincaico e incaico en los Andes Centro Sur. Por una parte, el pukara de Pariqollo presenta modestas dimensiones, pero con evidencias de haber sido intensamente habitado. En cambio, Kuico, pese a su mayor extensión y gran despliegue arquitectónico, no identificamos una densa ocupación. Ambos casos nos permiten proponer nuevas formas de concebir el fenómeno de pukara, no necesariamente como proyectos exitosos, sino que también como expresiones incompletas y opuestas, insertas en dinámicas sociales particulares que ensamblan a partir de historicidades diversas, con distintas intenciones, tensiones y acuerdos, alejados de lógicas lineales y progresistas.

Wandsnider, LuAnn (University of Nebraska)**[308]***Big Data Investigation of Persistence in Ethnically Homogenous and Heterogeneous Communities on the Late Nineteenth-Century Central Great Plains*

The archaeological record captures the material fallout of social processes operating at multiple temporal and spatial scales. Here I explore generational and supra-generational social processes of colonizers inhabiting a foreign and dynamic landscape under complex social conditions. Patent and census records allow for a big data approach to investigating the relative persistence of families who settled Custer County, Nebraska, from 1875 through 1900. Historical sociologists and anthropologists have documented the powerful role played by “tradition” or culture as families, hailing from different parts of (principally) western Europe, decided how to inhabit and subsist, and how children participated in their new life space. Some communities were ethnically heterogeneous, others less so; some were large, others quite small. The differential persistence of families living in these different social contexts and meeting the challenges presented to them is traced. I relate the Custer County case to other colonized landscapes.

Wandsnider, LuAnn [105] see Belcher, William

Wang, Fen [19] see Dong, Yu

Wang, Jiajing (Dartmouth College) and Xiaoli Qin (Fudan University)**[256]***Sacrificial Rituals and Dietary Complexity on the Eve of State Formation: New Insights from Dental Calculus Microbotanical Analysis at the Kangjia Site in China*

The Late Neolithic Longshan culture in China witnessed profound social and political transformations, characterized by the emergence of increasing social competition, long-distance trade, and inter-polity warfare. These developments eventually culminated in the formation of the first state-level societies in the Central Plains. Among the Longshan culture settlements, Kangjia provides some of the best preserved archaeological evidence for reconstructing both daily and ritual activities. The site provides evidence of house rituals involving competitive feasting, divination activities, and human sacrifice. This study examines the microbotanical remains from the dental calculus of human sacrificial victims at Kangjia to provide new insights into their dietary patterns and cultural activities. Preliminary findings suggest that the sacrificial victims had a relatively restricted plant-based diet compared to household animals and other Longshan people. This comparative analysis explores the dietary disparities, ritual activities, and political transformations that occurred right before the formation of the early Chinese states.

Wang, Jiajing [51] see Tang, Yiyi

Wang, Kuan-Wen (Institute of History and Philology, Academia Sinica, Taipei, Taiwan), Laure Dussubieux (Field Museum of Natural History), Yoshiyuki Iizuka (Academia Sinica, Taiwan), Kuang-Ti Li (Academia Sinica, Taiwan) and Cheng-Hwa Tsang (National Tsing Hua University)
[86]*From Mesopotamia to Taiwan: Early Plant Ash Glass in the South China Sea*

Plant ash glass was common around the South China Sea from the eighth century CE onward. While this “late” plant ash glass was mostly found in the form of vessel fragments of Islamic origin, “early” plant ash glass appeared before the mid-first millennium CE, predominantly in the form of glass beads. Unfortunately, little is known about the provenance of this early plant ash glass. We present a recent analysis of glass ornaments made of plant ash glass from Daoye, Daoye South, and Wujianguo in Taiwan, dating between the first and eighth centuries CE. LA-ICP-MS and SEM-EDS analyses indicate these artifacts likely originated from Mesopotamia. A close comparison of Al_2O_3 , CaO , MgO , K_2O , and P_2O_5 concentrations reveals similarities to the Mesopotamia Type I sub-group from the Sassanian territories, and they contain less MnO than the later

Islamic period. The presence of magnesiochromite further supports their Mesopotamian origin. This research shows that the early plant ash glass in the mid-first millennium CE was likely produced in Mesopotamia and reached Taiwan through maritime routes passing the Sasanian territories, South Asia, and Southeast Asia. The findings shed light on the early circulation of plant ash glass in the South China Sea region.

Wang, Li-Ying (Institute of History and Philology, Academia Sinica), Kuei-chen Lin (Academia Sinica, Taiwan) and Zhiqing Zhou (Chengdu Institute of Cultural Relics and Archaeology)

[315]

Investigating the Pottery Use of Neolithic Ceramics from Guijiabao in Southwest China Using Organic Residue Analysis
 Guijiabao is an archaeological site in southwest China that dates from the Neolithic to the historical period. Its crucial location at the interaction of the Hengduan Mountains and the Sichuan Basin offers a unique opportunity to study the southward spread of new crops and species into this region. Although it is widely accepted that mixed farming of rice/millet was introduced into southwest China around 4700 BP, it is still unclear how much the new crops or animals were utilized throughout the Neolithic transition. To better understand the culinary practices associated with the early development of agriculture, we examined organic residues preserved in Guijiabao pottery using residue analysis approaches. Our results suggest that terrestrial animals, such as ruminants, predominated in the Neolithic samples, with one potsherd showing a C₃ plant source. The findings indicate that rather than widely adopting farming practices, the residents of Guijiabao might have relied mainly on wild animal hunting, supplemented by rice/millet farming. This might be a subsistence strategy used in the highlands of this area. Our future work will include a comparison with faunal remains and pottery samples across different types of pottery and temporal phases to have a clearer picture of the local subsistence.

Wang, Yifan (University of Illinois, Urbana-Champaign)

[318]

Chair

Wang, Yifan (University of Illinois, Urbana-Champaign)

[318]

“The World Is a Garden”: Human-Animal Relations and Sustainability Comparative Studies of Classic Maya and Early China

The interactions among organisms along with environmental factors in non-Western cultures, require to be reexamined since Western humanity-nature binary explanations fail to take into account indigenous ontologies. In the title, I prioritize environment among these three objects because I want to demonstrate that it is a prerequisite, helping shape the ways of human and nonhuman interaction. Ancestral Maya and early Chinese cosmologies share similar considerations of animals as fellow beings, each having roles in maintaining the world. In the presentation, I propose that ancestral Maya pursued a respectful, sustainable interaction with wildlife and the forest in the Classic period from 300 to 900 CE by archaeofaunal and paleoenvironmental evidence from diverse contexts, combined with ideology and ethnography records. I will first address the ontological shift from Western notions and introduce how indigenous worldview reframes Environment-Human-Animal relations. Next, I will discuss sustainability in natural resources. Through the case study from the ancestral Maya world, I prospect that this project may provide a reference for reexamining similar topics in early China.

Wang, Yuanyuan [19] see Dong, Yu

Wann, Kevin (Texas A&M University), Logan Kistler (Smithsonian National Museum of Natural History), Heather Thakar (Texas A&M University) and Courtney Hofman (University of Oklahoma)**[202]***Preliminary Archaeogenomic Insights on the Domestication of the Avocado Tree*

The avocado is one of the most popular fruits exported worldwide and was originally domesticated in three independent episodes that resulted in the three main horticultural varieties we see today. One region of origin spans from the highlands of southern Mexico to the highlands of Honduras. The El Gigante Rockshelter is a site in the Southern highlands with remarkable preservation conditions that promoted the conservation of desiccated avocado rinds dated between 11 and 1ka. I plan to analyze the genomes of these ancient avocados to understand how and why they fell under domestication. Through a suite of bioinformatic tools, I will assess the similarities between ancient and modern avocado cultivars to determine the loss of genetic diversity associated with domestication, the potential for long-distance fruit exchange, and the degree to which the ancient specimens are ancestral to the domesticates thought to have originated in the region of El Gigante. I predict that early (~4ka) ancient tissue will have a greater degree of ancestry to modern Honduran domesticates, while later (2.5-1ka) remains may have originated from an exotic region, which would signify the establishment of long-distance exchange networks following the emergence of the Formative and Classic state-level society.

Ward, Emily, Mara Stumpf (Texas State University) and Sara Juengst (University of North Carolina, Charlotte)**[70]***Health and Disease during the Ecuadorian Formative: A Case Study from Buen Suceso*

The Ecuadorian Formative period (3800–300 BC) is known for the creation of ceramics, a transition toward agriculture, and the development of sedentary settlements along the Pacific coast. These social and economic changes were often associated with declines in health, as people ate less varied agricultural diets and increasingly encountered pathogens transmitted in human and animal feces. However, not all people experienced these changes the same. Buen Suceso, occupied from 3800 to 1425 BC, reflects many of the social and economic patterns associated with the Formative period (circular village, ceramic technologies), but to date, skeletal remains have not shown a corresponding rate of lesions associated with malnutrition or infectious disease. This poster presents two cases of osteomyelitis, an indicator of infectious disease, from Buen Suceso, documented on two individuals excavated in July 2023. These two cases stand in contrast to the general lack of pathology from the site, prompting us to reconsider our ideas about health and disease at Buen Suceso.

Wardle, Joseph (University of Michigan)**[314]***2023 Excavations at Early Classic (AD 200–500) Jalieza, Oaxaca, Mexico*

Jalieza is an important archaeological site in the Valley of Oaxaca that was founded during the Early Classic (AD 200–500). It is an especially useful case study for understanding how and why the Zapotec state fragmented. Previous excavations at the earliest sector of Jalieza, a hilltop called Cerro Danilín, suggested that the site may have resisted incorporation into the Monte Albán state during this time. Recent excavations in two new areas of Jalieza offer preliminary evidence that (1) structures during this time were oriented similarly to Tilcajete, a site resisting incorporation into the Monte Albán-headed Zapotec state during its expansionist period; and (2) obsidian (whose access was regulated by Monte Albán) was relatively scarce at Jalieza. These results are a vital step toward understanding the role that Jalieza played in the gradual fragmentation of the Monte Albán state, which by AD 700 had broken into many smaller secondary states. The results of new excavations show that the collapse of complex societies can be gradual, as local communities gain their autonomy and resist re-incorporation.

Warinner, Christina [145] see Bishop, Jack
 Warinner, Christina [268] see Faber, Sarah
 Warinner, Christina [199] see Ho, Joyce Wing In
 Warinner, Christina [199] see Ho, Percy Hei Chun
 Warinner, Christina [34] see Tzib, Frank
 Warinner, Christina [98] see Walden, John

Warner, John and James Crandall
[30]

Twenty Years of Interpretations from the Late Formative period Site of Jatanca (JE-1023), Jequetepeque Valley, Peru
 This paper will provide a retrospective of archaeological work that has been done at the Late Formative period site of Jatanca, located in the Pampa Mojucape of the Jequetepeque Valley, Peru. Since 2004, the architecture, ceramics, and surrounding landscape associated with Jatanca have undergone intensive analysis, which has provided an important foundation for subsequent work at chronologically later sites located within the immediate area such as Huaca Colorada and Tecapa. Finally, this paper will assess how our initial ideas associated with Jatanca have been subsequently modified in light of data collected from those nearby sites.

Warner, John [30] see Burch Joosten, Katrina
 Warner, John [30] see Park Huntington, Yumi
 Warner, John [76] see Quiñonez, Patricia

Warner, Mark (University of Idaho), Katrina Eichner (University of Idaho) and Renae Campbell (University of Idaho)
[184]

What 35 Students Tell Us: Reevaluating Traditional Field School Delivery Methods
 In 2019, the University of Idaho offered a field school in an alternative way—by having the field school incorporated into the regular academic year curriculum. With the cooperation of our registrar the class was folded into the regular fall semester class schedule. Four years later we did it again, resulting in 35 students enrolling in an eight-week urban field methods course. The field school was held on the grounds of our local high school and within walking distance both from the campus and from our town's business district. Working in a state (Idaho) that struggles with educating students, we have found that alternative delivery of field training addresses many issues. First, it enables students to gain field experience who otherwise cannot afford it under traditional field models. Second, it is a tangible way to demonstrate university engagement in the community that we are a part of. Finally, it is a counter narrative to the increasing skepticism about the relevance of higher education in rural communities. Ultimately, our project demonstrates how archaeology can meaningfully contribute to many of the pervasive challenges facing our discipline specifically and higher education in general.

Warner-Smith, Alanna (Smithsonian Institution National Museum of Natural History)
[89]
Chair

Warner-Smith, Alanna (Smithsonian Institution National Museum of Natural History)
[89]

Taphonomy and the Death Course: Materializing Value in an Anatomical Collection
 The Huntington Anatomical Collection, part of the Smithsonian Institution's National Museum of Natural History biological anthropology collections, is comprised of just over 3,000 individuals, about 50% of whom were foreign-born immigrants. They died in New York City public institutions between 1893 and 1921 and were dissected by Professor Huntington and his students. I consider the "death course" of Irish immigrants in the collection and trace how their movements—from public institutions to dissection tables and storage

rooms—materially altered the remains. Such taphonomy includes the addition of paper, ink, and metal, as well as the formation of silences and erasures, like the loss of names, the fragmentation of bone, and loss of elements. These death course taphonomies might be read in relation to value. Their bodies were variously (de)valued as indebted laborers in need of care and later as currency to repay so-called debts to society. As specimens, their research value was enmeshed in early twentieth-century concerns for race science, eugenics, and immigration policy, and in later methods-oriented research in forensic anthropology and osteology. These various notions of value left material marks on the remains and shape the ethical terrain of researchers' ongoing engagements with the collection.

Waselkov, Gregory (University of South Alabama)

[154]

Canoes, Canals, and Portages: Water Travel around the Northern Coast of the Gulf of Mexico, ca. AD 600–1800
Modern discoveries of Mississippian dugout canoes and a Middle Woodland canoe canal in coastal Alabama have prompted historical and archaeological research on water travel in the region. Applications of multispectral lidar and geophysical survey are proving useful in defining canal features, which have been partially obscured by changes in eustatic sea level since canal abandonment. Historical documentation of portages raises practical questions about how portaging the land links between navigable waterways was accomplished with dugout canoes.

Washburn, Dorothy [255] see Pollard, Helen

Washburn, Eden [81] see Nesbitt, Jason

Wasse, Alexander [139] see Rowan, Yorke

Watanave, Aldo (University of Florida) and Michelle Watanave (Louisiana State University)

[299]

The Salinar of the Middle Valley: An Overview of the Post-Initial Period Salinar Occupation at the Archaeological Site of Menocucho, North Coast of Peru

The Salinar phenomenon began after the collapse of the Chavín culture in part of the north coast of Peru around 500 BC. According to several studies, the Salinar period was a time of significant changes in the area. The inhabitants intensified agricultural production, connected with other regions, and apparently engaged in cycles of conflicts. The archaeological site of Menocucho, located in the middle section of the Moche Valley, was one of the first monumental sites inland after the Preceramic period (5000–1800 BC). It presents several occupations beginning in the Initial period (1800 BC). During two excavation seasons at the site, the authors identified a short but intense occupation corresponding to the Salinar period. Interesting changes occurred in both the architecture and the material culture. Additionally, this occupation was marked by intense pluvial events that left at least 20 cm of sedimentary layers created by recurrent flooding. In this presentation, the authors will provide evidence of the Salinar occupation at the site and engage in a discussion of what is understood as Salinar through the local and regional data and its implication for the future understanding of the archaeology of the north coast of Peru.

Watanave, Michelle [299] see Watanave, Aldo

Waterman, Audrey [224] see Tumelaire, Jacob

Waters, Michael (Texas A&M University)**[253]***Five Decades of Paleoindian Archaeology*

For over 50 years, David Anderson has investigated many aspects of the prehistory of North America, especially the American Southeast. At the start of his career, Clovis was considered the oldest evidence of a human presence in the Americas. Archaeological and genetic data now inform us that people were in the Americas from at least 15,000 to 16,000 years ago. This requires a reevaluation of everything we thought we knew about the First Americans—the route they took entering the Americas, how they dispersed across the landscape, the tools they made, how they interacted with the megafauna, and the meaning of Clovis. David Anderson has been at the forefront of Paleoindian research and has kept pace with these changes. He created the Paleoindian Database of the Americas (PIDBA), which presented the big picture—defining the distribution and density of Clovis and later fluted points across the landscape. His papers and books about the early prehistory of North America, especially the American Southeast, provide insight and ideas about the earliest people to inhabit this region. David Anderson has also been a mentor helping many early career scholars in their quest to dig into the prehistory of the American Southeast.

Watkins, Tia (University College London)**[74]***Moderator***[74]***Discussant***Watkins, Timothy (Arizona Bureau of Land Management)****[144]***Discussant*

Watling, Jennifer [54] see Kater, Thiago

Watson, Caroline (College of William and Mary)**[325]***Temporalities of Disaster Taphonomy: A Contemporary Archaeological Case Study in Southern Puerto Rico*

Disaster landscapes dominate Puerto Rico's Anthropocene, past and present. Yet, since the devastating 2017 hurricane season, climate change and coloniality have materialized unprecedentedly as roofless homes, shifting coastlines, and abandoned lots. As recovery practices become a part of everyday life in Puerto Rico, a contemporary archaeological approach helps address the complexities of how and where disaster material exists at the intersection of ecological and social forces. In this paper, I outline the depositional layering of an archaeological disaster-scape in the southern coastal town of Playa Ponce. Several case studies address the nonlinear temporalities of taphonomy and the futurity of site formation, as archaeological sites are generated, transformed, and removed cyclically. I understand the current infrastructural landscape of Playa Ponce as the layered materializations of unfulfilled promises of repair, yet also as the accumulation of individual and community practices that emerge from living with dangerous infrastructure. Through embodied memories and stories of local residents, a material ethnography of disaster emerges from my archaeological observations. I use this to expand the temporal and causal framework of taphonomy, and to rethink mundane materials and infrastructures as possessing a sociality of disaster.

Watson, James [75] see Carpenter, John

Watson, Rachel (Louisiana Division of Archaeology)**[5]**

Witz Naab and Killer Bee Revisited: New Interpretations of Two Salt Mounds in Paynes Creek National Park, Belize
The Witz Naab and Killer Bee mounds are some of the few remaining onshore remnants of the Paynes Creek salt works. In this presentation, we will reexamine the interpretations of two salt mounds at the Paynes Creek Salt works. These excavations are part of a larger NSF funded project directed by Dr. Heather McKillop (Louisiana State University) excavating underwater sites associated with wooden buildings stunningly preserved by mangrove peat below the seafloor. Evidence of brine enrichment has been obfuscated at the underwater sites due to sea-level rise. This process is virtually universal in ethnographic and historic case studies elsewhere. This paper will discuss the initial findings and new interpretations concerning these mounds' possible function and potential relationship with the nearby submerged salt works.

Watt, David (National Park Service)**[177]***Chair***Watt, David (National Park Service), Adam Wiewel (National Park Service), Steven De Vore (National Park Service) and Jon Garcia (National Park Service)****[177]**

Gone to Find Guinn: A Lost Farmstead at Wilson's Creek National Battlefield
Archaeologists with the Midwest Archeological Center (MWAC), local volunteers, and Wilson's Creek National Battlefield (WICR) staff conducted a systematic metal detector and magnetometry survey of the proposed location of the Guinn Farmstead. The site of an ambush during the Union Army's retreat in the August heat of 1861, Guinn Farm is important for a broader understanding of the first major battle of the US Civil War in the Trans-Mississippi. Results from the survey provided high-resolution data regarding subsurface artifact distributions that were ground-truthed during a metal detector inventory. The resulting data are presented in this poster and elaborate on the brief historical accounts from survivors. The project places Guinn Farm in the broader context of the brief and violent history of the "Bull Run of the West."

Watt, David [177] see De Vore, Steven

Wattenmaker, Patricia (University of Virginia)**[85]**

Toward a Multispecies Perspective on Human-Animal Networks in Early Urban Societies of Upper Mesopotamia
Decades before anthropologists advocated for multispecies anthropology and ethnography, Richard Redding was charting a new path for a multispecies approach to anthropological archaeology. His research reveals an implicit awareness of the complexity of human-animal relationships that is a hallmark of the multispecies concept. For example, his models of caprine herding and culling practices highlighted both the logistical challenges of raising multiple species in tandem as well as the needs not only of humans but also of the other animal species. Drawing inspiration from Redding's original and distinctive approach to the analysis of ancient human-animal dynamics, this paper examines zooarchaeological data from third millennium Upper Mesopotamia to consider how findings might be better understood through the lens of a multispecies approach. The analysis discusses and utilizes some of Redding's specific analytical techniques that provide a more holistic understanding of the web of interactions between humans and various animal species. For example, the use of density ratios makes it possible to track fluctuations in the abundance of each species through time. The paper aims to elucidate factors that underlie the multiple signature species distributions in urban and rural sites, ritual spaces, and houses of Upper Mesopotamia.

Watts, Christopher (University of Waterloo)**[331]***The Persistence of Presence in the Rock Art Traditions of the Great Lakes*

While recent scholarship has fruitfully considered the importance of Indigenous ontological commitments (e.g., to power and place) in the creation of rock art, notions of presence as a discrete component of an image's being remain underexplored. In this contribution, I seek to examine these notions as distinct from representational logics in their emergence within relational ecologies and qualities of action. Yet despite their ephemeral, distributed, and dynamic properties, notions of presence can also be understood as persistent in the way they continually provoke—whether by guiding the creation of panels in the past or in facilitating understandings of rock art in the contemporary present. In this way, investigating the persistence of presence is not about iconographically documenting veiled and static meanings across time and space but about recovering the interactive conditions through which presence was and can still be conceived. Rock art from the Great Lakes, particularly the petroglyphs of Kinooamaagewaabkong, near what is now Peterborough, Ontario, and Ezhibiigaadek asin in what is now the Sanilac Petroglyphs Historic State Park (Michigan), provide the case studies for exploring these ideas.

Watts, Corinne (University of Iowa)**[327]***Chair***Watts, Corinne (University of Iowa)****[327]***The Power of Reuse and Removal: A Case Study of the Indonesian Megaliths of Iowa City, Iowa*

The co-opting of cultural heritage is one of the ways that archaeological materials are “reused.” This process references and reinforces power structures related to cultural identity through the control of archaeological material, narratives, and meanings. In some situations, the process includes the physical movement of cultural material. In this vein, I consider the case study of 50 megaliths at Harvest Preserve, a private sculpture garden and nature preserve in Iowa City, Iowa. Around 3000 BCE, these megaliths were erected on the island of Flores, Indonesia, where they remained for several millennia. In the early 2000s, the owner of Harvest Preserve purchased these pieces through a Chicago-based art and antiquities broker and each of the megaliths was moved by boat and train from Flores to Iowa City. Through petrographic analysis of the stones, semi-structured interviews with the reserve's owner, and archival analysis, I examine the itineraries of these megaliths. Specifically, I discuss the ways that their removal, installation, and ongoing use demonstrate the ways that “reuse” of material changes with new spaces and actors, while still referencing earlier aspects of the object's itineraries.

Watts, Ian**[25]***An Ideology of Blood at the Root of Symbolic Culture*

At ~160 ka, roughly at the end of our African speciation, archaeologists identify a change from sporadic to habitual use of red ochre. This has been interpreted as primarily a pigment for decorating performers' bodies during communal rituals. What were these rituals, and why was red so central to the establishment and unfolding of the symbolic domain? Archaeologists and paleoanthropologists are cautious about turning to hunter-gatherer ethnography as a resource in evaluating competing explanatory hypotheses. Challenging convention, I present the first cross-cultural comparative review of African hunter-gatherer ritual use of red substances and associated beliefs. The most consistent symbolic theme encountered is a metaphoric relationship between women's reproduction and men's hunting. This accords with over a century of social anthropological speculative thought and a prediction made by the Female Cosmetic Coalitions hypothesis of the emergence of symbolic culture. This hypothesis also predicted—long before it could be tested—the establishment of habitual red ochre use by ~160–140 ka. The main competing hypothesis, positing intergroup competition between male coalitions, has yet to generate predictions testable in the light of symbolic

evidence. Ethnography cannot be transposed onto the deep past, but it can help constrain evolutionary interpretations of the early ochre record.

Watts Malouchos, Elizabeth (Illinois State Archaeological Survey) and Brandon “Everett” Bandy (Quapaw Nation)

[176]

Tracing the Relationships between the Lower Ohio and Central Mississippi River Valleys through the Bradley Off-Site Remediation Project

The Bradley Off-Site Remediation Project remediates deep tilling that occurred during a Natural Resources Conservation Service project at the late precontact Bradley site (3CT7) in Crittendon County, Arkansas. The Bradley Project supports collections-based research important to the Quapaw Nation by exploring connections between the Mississippian Angel phase (1000–1450 CE) in southwestern Indiana and late precontact phases of northeastern and central Arkansas. Ties between these regions have been readily recognized through the presence of artifacts typical of the Central Mississippi River Valley—Nodena points, Parkin Punctate pottery, head pots, and human effigy bottles—at late precontact Caborn-Welborn phase (1400–1700 CE) sites at the confluence of the Wabash and Ohio Rivers. However, Nodena points, Parkin Punctate pottery, and human effigy bottles have also been recovered at the nearby Mississippian Angel Mounds center. Relationships between the Angel and Caborn-Welborn phases are unclear and there is a large degree of overlap in the geographic and temporal extents, material culture, and architecture of the two phases. This poster presents preliminary results of the Bradley Project that reevaluate connections between Angel and Caborn-Welborn phases to better understand farther flung relationships with the Central Mississippi River Valley.

Wauters, Valentine (Université Libre de Bruxelles [ULB]; Royal Museums of Art and History [RMAH]) and Aurore Mathys (Royal Belgian Institute of Natural Sciences)

[188]

The Carchi-Nariño’s Mollusks Shells Aerophones of the Royal Museums of Art and History of Brussels: Analysis by CT Scan

The archaeological collection of the Royal Museums of Art and History in Brussels gathers more than 377 precolumbian objects from Ecuador. Among these are 20 wind musical instruments (flutes and ocarinas) in ceramic from the Carchi-Nariño culture. These objects, which joined the collections in the 1990s, had remained dormant in the museum’s storage area, erroneously attributed and unstudied. These objects are exceptional on several levels. First of all, they belong to a little-known cultural group from Ecuador. Their uniqueness lies in the imitation of marine mollusk shells in ceramic, while at the same time being aerophones. Their iconography and decorative techniques are also very interesting. The purpose of this study was to highlight this set of objects. In addition to the formal, stylistic, and iconographic analyses, archaeometric analysis via CT scan were carried out to evaluate whether these ceramics imitate mollusk shells from the outside or, perhaps, also from the inside. These analyses also aimed to study the whistling system and the technological manufacturing processes. These objects are true technical prowess indeed. The shape of these mollusk shells, which roll up on themselves, involves material superimpositions and therefore complications for their shaping and firing.

Wawatay, Solomon [202] see Lamothe, Francis

Waweru, Veronica (National Museums of Kenya), Francis Kirera (Mercer University), Nasser Malit (SUNY Potsdam), Rahab Kinyanjui (National Museums of Kenya) and Aryeh Grossman (Midwestern University)

[55]

Paleoanthropology in the Central Highlands of Kenya: A Knowledge Co-production Research Model

Human origins research in the East African region has largely focused on sites within the rift basin. The story of human origins is also credited to highly educated Western nation paleoanthropologists and a few local researchers. The work presented here demonstrates the importance of high-elevation tropical sites to human evolution using the Central Highlands of Kenya (CHK). The CHK covers the area encircled by the Aberdare, Mathews, and Kirisia ranges and Mt. Kenya. Based on newly discovered evidence from sites found here, these orographic features moderated local environments and hydrology, shaping evolutionary processes in the region. Using a knowledge co-production model in which locals at areas with prehistoric sites work together with scientists to carry out research, the work discussed here also demonstrates that local populations are an important resource in human origins studies. Since 2019, cooperation with residents at CHK has facilitated the rapid discovery of sites from the late Miocene to the Holocene by local people who know the landscape intimately. This also aids in wider participation by locals, increases the uptake of research products, and promotes pride in ancient heritage found at the CHK.

Waxenbaum, Erin [47] see Vail, Alexander

Weaver, Brendan (Florida State University) and Nicola Sharratt (Georgia State University) [227]

Botijas and the Black Pacific: Stylistic and pXRF Analysis of Amphorae produced by Enslaved Potters at Early Modern Nasca, Peru

Botijas were the universal packaging for dry and liquid goods transported throughout the global Iberian empires of the Early Modern world. Heirs to the potting traditions of Mediterranean amphorae, these vessels are the most ubiquitous ceramics at Spanish colonial sites in the Americas. We present new research combining stylistic analysis and portable X-ray fluorescence spectrometry (pXRF) to examine ceramic traditions among enslaved African-descendant potters tasked with producing botijas at vineyard estates on the southern Pacific coast of Peru. From the early seventeenth century through the mid-eighteenth century, these ceramicists produced botijas matching dominant Iberian forms, while motifs exhibit a range of innovative attributes. Botija setters resonate with Atlantic African decorative traditions. Preliminary pXRF analysis aids in our understanding of the development of these traditions and the organization of enslaved potters at the haciendas of the Nasca region.

Weaver, Wendy (USACE Mobile District)

[4]

Historic Human Remains Detection Methods and Results at Fort Scott (9DR8) US Army Cemetery, Lake Seminole, Georgia

Fort Scott (9DR8) was a US Army fort constructed in 1816 on the Georgia frontier on the north bank of the Flint River during the First Seminole War. Meant to be a temporary encampment, it was located to protect White frontiersmen pushing into Creek territory. Occupied until 1821, the fort's occupants participated in the destruction of Negro Fort on the Apalachicola River, the Fowltown Battles, and other skirmishes along the Florida-Georgia border. Ultimately, malaria won out and the fort was abandoned. Limited cultural resources investigations of the site began in the 1950s ahead of dam construction, but none identified the exact location of the fort's cemetery which was reported to contain 200–300 burials. Today, the fort's location is remote, overgrown, and beneath fallen trees from Hurricane Michael. There is no surface expression of the cemetery. Erosion and water encroachment from Lake Seminole threaten the site. As part of a Section 110 cultural resources investigation at the site in 2023, the Mobile District will use Historic Human Remains Detection (HHRD) dogs and ground-penetrating radar (GPR) to locate the nineteenth-century US Army cemetery at Fort Scott. This paper presents the results of this investigation.

Webb, Levi [283] see Camp, Stacey

Weber, Andrzej [171] see Werens, Karolina

Weber, June (New South Associates Inc.), M. Anne Dorland (New South Associates Inc.), Benjamin Hoksbergen (Redstone Arsenal Cultural Resource Manager), Stefanie Perez (New South Associates Inc.) and Jenna Tran (New South Associates Inc.)

[6]

A Community-Engaging Data Recovery of the Fennell Plantation: A Journey from Enslavement to Black Landownership in North Alabama

New South Associates (NSA) conducted a Phase III Archaeological Data Recovery of the Fennell Plantation (Site IMA840) on Redstone Arsenal (RSA) in Madison County, Alabama. The site occupation spans nearly 100 years (1843–1942) and records the transition from enslavement to Black landownership in North Alabama. Data recovery efforts involved a ground-penetrating radar (GPR) survey, unit and shovel test excavation, mechanical stripping, archival research, an archaeological literature review, artifact analysis, and specialized analyses of subsistence remains. These efforts provided valuable datasets for exploring the lifeways of both plantation owners and the Black enslaved population that helped to forge the thriving historic African American community of Mullins Flat. Throughout the data recovery process, NSA partnered with RSA Cultural Resource Manager Ben Hoksbergen to deliver a community-engaging approach that included an open house for media outlets, public talks for local archaeological societies, a social media presence, and volunteer opportunities for the public to participate in feature excavations. This approach facilitated positive outcomes, including engagement with descendent community members and public involvement in the recovery and interpretation of archaeological data.

Weber, Sadie (Universidade de São Paulo)

[27]

Eating and Drinking at Chavín de Huántar: What the Microbotanical Evidence Can (and Can't) Tell Us

This paper presents the cumulative findings, to date, of ongoing microbotanical analyses carried with the aim of interpreting internal and external interactions from diverse contexts at Chavín de Huántar. Since microbotanical analysis offers us a view into the production and consumption of foods and beverages, we have a privileged, albeit limited, perspective on the nature of Formative period identities. Cuisine is a powerful marker of identity, not only in the consumption of foodstuffs, but also in its preparation and consumption. The preparation of food and drink is a laborious process that requires specific knowledge, context, and materials to complete, and both the act and circumstances of eating and drinking vary according to sociocultural norms. Further, the consumption of diverse foods in certain contexts points to different uses of space, as well as the different roles that people may have played in relation to the activities carried out within and beyond the monumental core of the site. Moreover, the presence of a large proportion of nonlocal ingredients helps us to better understand Chavín de Huántar's interactions with outside groups.

Weber, Sadie [81] see Cusicanqui, Solsire

Webster, Laurie (University of Arizona)

[41]

The Chronology of Basketmaker Perishable Craft Traditions in Southeastern Utah and Their Potential as Cross-Dating Proxies

The Cedar Mesa Perishables Project has documented almost 5,000 perishable artifacts from alcoves in southeastern Utah. As part of this research, the project has radiocarbon-dated more than 100 well-preserved textiles, sandals, baskets, wooden implements, and other perishable artifacts from Grand Gulch, Butler Wash, Allen Canyon, and Glen Canyon, creating the largest dataset of directly dated perishable artifacts from this region. With 80% of the sample represented by Basketmaker technologies, these data offer new insights into the chronological development of early Ancestral Pueblo perishable technologies and a more nuanced understanding of long-term technological and stylistic change during the 200 BC–AD

750 period. The potential use of Basketmaker sandals and other perishable artifacts as preceramic dating proxies is explored.

Weeks, W. Rex [29] see Jolie, Edward

Weiland, Andrew (Midwest Archeological Center, NPS)

[177]

Discovering Camp Guernsey: An African American Civilian Conservation Corps Camp

The Midwest Archeological Center (MWAC) of the National Park Service has completed the initial stages of identifying the hitherto undocumented Camp Guernsey, a segregated, African American Civilian Conservation Corps camp in Senecaville, Ohio. Using lidar and minimal ground truthing, MWAC staff, in collaboration with staff from the North Country Trail, the Muskingum Watershed Conservancy District, and the Buckeye Trail Association have begun to discover the basic layout of this historic era archaeological site. The site holds high research potential for understanding the lifeways of the young Black men of Company 580 in the time between the two World Wars. Although the works of these men can still be seen at the nearby campground at Seneca Lake, primary historic sources are scant. Archaeology, aided by geospatial technologies, has the most potential for telling the story of this company.

Weiner, Robert (Dartmouth College)

[331]

Persistent Places, Affordances, and Temporalities on Chacoan Time Bridge Roads

Beginning in the 1980s, researchers noticed that some monumental avenues in the Chaco World (ca. AD 800–1200) of the Four Corners region of the US Southwest were “roads through time” linking non-contemporaneous sites. These so-called “time bridges” are often interpreted as monuments built by later generations to connect with the traces of ancestral dwellings, perhaps in service of political claims of continuity. In this paper, I draw on recent fieldwork to reexamine two Chacoan time bridge roads—the South Road and Asdzáán Tááh Íiyá (Taylor Springs) Road—and outline evidence suggesting that formalized roadways existed at these locations from their earliest periods of use. I explore the utility of conceptualizing Chacoan roads used across multiple centuries as persistent, affective places rather than as a form of memory work; in other words, places with qualities that attracted people and altered history across centuries. I consider some of the affordances of land and water—including springs, rain-making buttes, naturally occurring roadways, and fossils—that appear to have drawn Ancestral Four Corners people to construct roadways to such locales in the first place and trace elements of the changing relationships between roads, places, and people over the course of Chacoan history.

Weinmeister, Jessica (Binghamton University)

[52]

Hidden in Plain Sight: Documenting a Forgotten Chacoan Outlier in the Mesa Verde Region

While forgotten settlements are a common discovery in the jungles of Central America where dense canopies conceal all traces of prehistory, they are a much less common phenomenon in the American Southwest. However, recent research demonstrates that a poorly known Ancestral Pueblo site on private property in southwest Colorado is one of the most important sites in the region. First, it is a contender for the largest Pueblo I site in the Mesa Verde Region. Second, it is a Chacoan outlier. Third, its occupation spans the poorly studied period from the late AD 800s to early 900s when depopulation led to scarce settlements in the region. In addition, the site has produced approximately 10,000 chipped stone tools, over 1,000 ornaments, bifurcated basket effigies, and other noteworthy artifacts. For my master’s thesis, I mapped the site, documented its history, and analyzed thousands of its artifacts to better understand its occupation span, relationship to other sites, and potential contributions to our knowledge of the Ancestral Pueblo. The Crosspatch Site, as it is now called, has the potential to change our understanding of prehistoric occupation

in the Mesa Verde region, particularly during Pueblo I, the transition into Pueblo II, and early Chacoan influence.

Weinmeister, Jessica [284] see Baldner, Linnea

Weinmeister, Jessica [286] see Godhardt, Ava

Weinstein, Richard (Coastal Environments Inc.), David Kelley (Coastal Environments Inc.) and Charles Pearson (Coastal Environments Inc. [retired])
[57]

Searching for the Submerged: Five Decades of Research Related to Drowned Prehistoric Sites in the Gulf of Mexico and Coastal Louisiana

Since 1975, personnel at Coastal Environments Inc. have applied a geophysical and geological approach in their search for drowned prehistoric sites on the outer continental shelf of the Gulf of Mexico and within marshlands of south Louisiana. Initial efforts culminated in the retrieval of numerous vibracore samples from the drowned Sabine River valley offshore Louisiana and Texas and the discovery of a ca. 8,000-year-old *Rangia cuneata* shell deposit about 17 m below modern sea level and 5 m beneath the Gulf bottom. Subsequent research in coastal marsh settings using similar techniques also successfully identified the presence of submerged prehistoric shell middens.

Weinstein, Richard [57] see Costa, August

Weinstein, Richard [24] see Hays, Christopher

Weissel, Marcelo (Museo Arqueológico de La Boca)

[158]

Buenos Aires Estuary Waterfront: The Zen City Wreck and Coastal Urban Archaeology

This contribution presents the status of research and institutionalization of the underwater and coastal cultural heritage of the city of Buenos Aires. For this purpose, the environmental information and characteristics of the archaeological landscapes surveyed between 1995 and 2019 in excavations carried out in lands “gained from the river” on different parts of the city are presented in a synthetic way. The text begins with a description of the environmental and historical characteristics of the city’s coastal sedimentary substrates, natural anchorages, and shelters. That is followed by the background and state of the question of archaeological investigations, in order to set the basis for the ontological and methodological framework of the work on a regional scale. We continue with the presentation of the materials and archaeological assemblages that were surveyed in order to analyze the variability of sites and the diversity of artifactual functions. The results of the analysis are presented and discussed on a regional scale and chronology, considering the archaeological visibility of coastal embankments, old docks and wharfs, anchorages, sectors with ballast or hides, shipwrecks, barracks, and shipyards.

Weitzel, Elic (University of Connecticut)

[318]

Modeling White-Tailed Deer (Odocoileus virginianus) Responses to Human Population Change and Ecosystem Engineering in Precolonial and Colonial Eastern North America

[WITHDRAWN]

Welch, Jacob (Yale University)

[90]

Plenty of Fish for Fowl in the Watery Worlds of the Kerr Archive

Carved along the exterior of a cylinder vase (K6511), two waterfowl grip flailing fish with their beaks. These fishing fowl occur again on polychrome pots, effigy bowls, censer stands, and modeled stucco friezes.

Numerous examples of the “Waterbird Theme” came to light through the work of Justin Kerr, who initiated a discussion of the theme online and reinforced its merit for iconographic analysis. This paper uses Justin Kerr’s photographs to answer his call to examine the Waterbird Theme, which remains unclear despite its common occurrence in Maya Art. I specifically build on Justin Kerr’s observations that the Waterbird Theme overlaps with specific deities and corresponds to historic and modern Maya myths. Making sense of this theme offers one piece of the puzzle for a sequence of narratives found on vases in the Kerr Archive that relate to the death, journey, and afterlife of the Maya maize god.

Welch, John [236] see Britton, Emma

Welch, John [88] see Wright, Aaron

Welch, Mya

[174]

Determining Datums and Considering Climate: The Relocation of Inundated Apalachee Bay Sites in the Modern Day Between 10,000 and 5,000 years ago, the sea level of the Apalachee Bay, Gulf of Mexico, was roughly 20 m lower than today, extending the paleoshoreline nearly 75 km further south and providing significantly more habitable land for prehistoric populations (Faught 2004). Although many submerged sites along the Paleo-Aucilla river channel have been surveyed, the reference datum used to identify their GPS coordinates was not recorded, making modern relocation efforts exceedingly difficult. By testing different reference datums for certain 1990s points and comparing these to coordinates of sites that have recently been relocated, this project seeks to determine what datum was likely used by former excavations and obtain accurate coordinates for other sites. An additional focus of this project is to develop an understanding of what time of year is best to engage in fieldwork by considering recent local weather data, given that the times formerly ideal for fieldwork now heavily feature dangerous conditions for boating due to the shifting climate worldwide. Both effective use of available time in the field and precision of coordinates are critical for relocating sites, leading to a more comprehensive understanding of Southeast prehistory and the establishment of better submerged site protections in the Apalachee Bay.

Welker, Martin (Arizona State Museum)

[249]

What Lovely Teeth You Have: An Examination of Canid Dental Anomalies and Their Use in Archaeology

A survey of over 200 published sources on archaeological domestic dogs in the Americas reveals that dental anomalies, particularly the absence of the first mandibular premolar, are mentioned in Native American domestic dogs with some frequency. They have even been promoted as a means of identifying domestic dogs in the Americas. However, this pattern has never been received a detailed examination. Traced through the literature, this idea appears to stem from Dr. Edward Cope’s analysis of a single dog mandible from what is today known as the Palmer-Taylor Mound in Orange County, Florida (published by Clarence B. Moore, 1893). When placed in context, it becomes apparent that congenital tooth loss occurs in modern wolves, coyotes, and foxes at rates approaching 10%. Though most veterinary sources focus on physically small purebred dogs where this condition is particularly common, dogs subjected to less selective pressure exhibit this characteristic at a rate of only 3%–7%. These data suggest that congenital tooth loss is not a reliable marker of domestication in dogs.

Welker, Martin [260] see Judkins, Abigail

Welker, Martin [268] see Schollmeyer, Karen

Welker, Martin [200] see Semanko, Amanda

Wellons, Sovi-Mya (Dartmouth College), Ryan Seidemann (Louisiana Department of Justice) and Christine Halling (Louisiana Department of Justice)

[300]

Tourist Trinket, Religious Object, Human Remains, or Something Else: Kapalas in the Online Market

Buddhist and Hindu Tantra practitioners have a well-known tradition of salvaging the skeletal remains of tantric monks from sky burials and converting elements for subsequent ceremonial use. These converted remains, broadly referred to as charnel ground ornaments, often include human skull calottes made into bowls (*kapalas*) and drums (*dumaru*) and certain long bones made into musical instruments (*rkang gling*). These items have appeared in ethnographic collections for centuries. With the advent of the online market, the sale of these items into the tourist and oddities market has exploded. Each year, hundreds of purported *kapalas* are listed for sale on eBay. The majority of these items are clearly real human bone. However, their provenience is dubious. It is clear that there are not enough sky burials to supply this robust trade. This presentation reviews four years' worth of eBay listings to understand the market and to contextualize them within the known religious tradition from which they purportedly derive. Combined with published accounts of active red markets in Asia, these auctions raise moral, ethical, and legal concerns. A proposed framework for management, documentation, and enforcement from an anthropological perspective is presented to continue the dialogue of protecting sacred objects.

Wells, E. Christian [34] see Novotny, Claire

Wells, Joshua (Indiana University South Bend), David G. Anderson (University of Tennessee, Knoxville), Eric Kansa (Open Context), Sarah Whitcher Kansa (Alexandria Archive Institute) and Kelsey Noack Myers (US Army Corps of Engineers)

[173]

Ten Years of DINAA: Lessons for Archaeological Methods, Practice, and Ethics from a Decade of Experience Compiling, Organizing, and Publishing Data with the Digital Index of North American Archaeology

On November 13, 2013, the Digital Index of North American Archaeology (DINAA) published its first set of completely free and open scientific and cultural data for about 86,000 archaeological sites. Ten years later, DINAA provides information for almost one million archaeological sites. This includes vast holdings of primary scientific and cultural data, bibliographic information and links to tens of thousands of research publications and reporting about particular archaeological sites, and links to scores of external sources of online or physical data and/or collections about particular archaeological sites. DINAA has become an important fixture in national and international scientific infrastructure, with hundreds of citations by researchers in Google Scholar, students in ProQuest Theses, and heritage experts in government reports, as well as massive amounts of press attention. The development and publication of DINAA as a public scientific resource has exemplified a wide range of the challenges and opportunities that digital methods encounter in the complex scientific, political, and ethical landscape of American archaeology. Issues to be discussed include (1) achievement of FAIR and CARE data principles, (2) developmental and long-term costs, (3) data-management preparedness of archaeological practitioners and educators, and (4) organization of stakeholder communities and offices for contribution and critique.

Wells, Joshua (Indiana University South Bend)

[280]

Discussant

Wells, Joshua [253] see Kansa, Eric

Wells, Joshua [253] see Yerka, Stephen

Wende, Anthony [102] see Peeples, Matt

Wendt, LeeAnne (Muscogee [Creek] Nation)**[195]***Discussant***[WITHDRAWN]****Wengrow, David****[298]***Discussant***Wenzel, Jason (Gulf Coast State College)****[175]***Searching for Old St. Andrews: A Program for Community Archaeology in Panama City, Florida*

This poster exhibits current research by Gulf Coast State College in examining sites associated with the “lost” town of St. Andrews, which was initially established in 1827 on St. Andrews Bay in northwestern Florida. Believed to be abandoned in 1863 during the American Civil War, archaeological investigations at properties associated with the town’s early settlers have enhanced our knowledge of life in this frontier town. The recovery and examination of material culture associated with Indigenous peoples helps to further enlighten our understanding of the area’s deep cultural history.

Werens, Karolina (University of Oxford), John Pouncett (University of Oxford), Christophe Snoeck (Vrije Universiteit Brussel), Rick Schulting (University of Oxford) and Andrzej Weber (University of Alberta)**[171]***A New Bioavailable Strontium Baseline for the Baikal Region*

A new bioavailable strontium isotope ($^{87}\text{Sr}/^{86}\text{Sr}$) baseline was created for the Baikal region, covering ca. 1.5 million km². With an ongoing, extensive archaeological investigation of ca. 200 prehistoric cemetery sites in this vast area, there is a need for a reliable isotopic model of environmental strontium variation to contextualize human and faunal data. The new isoscape is based on 349 plant samples, including 174 new measurements. The strontium ratios in plants were highly variable and ranged from 0.70643 in the mafic rocks in Trans-Baikal to 0.75225 in Precambrian rocks of felsic origin on the west coast of Lake Baikal. The uniquely distinct geological variability and biodiversity in the Baikal region of Siberia provide favorable conditions for isotopic studies and method development. This paper compares and evaluates two approaches to modeling isoscapes: spatial aggregation and machine learning, each used to produce and compare effectiveness of geographic assignments based on strontium ratios measured in dental enamel. The new baseline and spatial assignments scripts can also be applied in other fields: forensics, environmental sciences or ecology, to support studies of provenance and mobility in both the past and present.

Werner, Helen (Beloit College)**[330]***In Support of a Holistic Approach to Bioarchaeology: The Distribution of Bacterial Genera by Presence of Material Culture in the Milwaukee County Poor Farm Cemetery*

Complicating the narrative of the traditional poor farm cemetery, the work of Patricia B. Richards has led to a more humanistic approach to interpreting archaeological data. This study presents oral microbiome data from 25 female individuals from the Milwaukee County Poor Farm Cemetery (MCPFC) population. After approval was given in spring 2022 by the Archaeological Research Laboratory at the University of Wisconsin, Milwaukee, bacterial DNA was extracted from dental calculus and the 16s rRNA gene was amplified. Four of the individuals showed the presence of a genera that has pathogenic species, suggesting a potentially high level of infectious diseases within the MCPFC residents. Statistical analyses showed an unequal distribution of pathogenic genera between the individuals who had little material culture present in their burials and those

who did not, potentially contributing to the reidentification of the MCPFC individuals, a central goal of the work being done with this population. Along with the presentation of these data will be a discussion of how the work of Dr. Richards has shaped our understanding of the complexity of life within a poor farm and how the integration of multiple lines of evidence can lead to a more holistic understanding of pauper cemeteries.

Werner, Joseph and Flannery Surette (Okanagan College)
[257]

Drilling into the Past: Social Bead Making for Undergrad Learning

The first ostrich eggshell beads appeared across parts of Africa 50 ka and represent one of the earliest forms of ornamentation. Far from being uniform, research shows differences in bead diameter which cluster regionally and chronologically. These clusters are thought to represent distinct bead making traditions in eastern and southern Africa and are used as a proxy for tracking the migration of herders into southern Africa. Our experiment attempts to determine if there are other relevant but non-stylistic variables that influence bead diameter that could add complexity to these interpretations. During our research, we were assisted by numerous students, which led us to see the potential for bead making as a pedagogical tool. As a classroom activity, bead making requires little preparation, is safe, and features a shallower learning curve than similar alternatives such as flintknapping. Our experiment also generated a large volume of beads that could serve as a teaching collection. Not only do the beads give students the opportunity to handle replicated Stone Age technology, but they could serve as a dataset for students to manipulate, allowing them to learn the basics of data collection, management, and analysis.

Wernke, Steven [223] see Turley, Samantha

Wernke, Steven [323] see Kohut, Lauren

Werts, Scott [230] see Woodfill, Brent

Wescott, Konnie [270] see Orr, Andrew

Wesolowski, Veronica [54] see Stabile, Rafael

Wesolowski, Veronica [178] see Di Giusto, Marina

Wesp, Julie (North Carolina State University)
[47]

Chair

Wesp, Julie (North Carolina State University), Justin Johnson (North Carolina State University), Hope Eisenstein (North Carolina State University), Santiago Tobón Grajales (Manzana Jesuítica de Bogotá) and Felipe Gaitán Ammann (University of Reading)

[47]

Digital Palimpsest of Cultural Heritage: A Virtual Experience of the San Ignacio Church in Bogotá, Colombia

This interdisciplinary project uses photogrammetry and video game development software to capture and digitally re-create the interior of the San Ignacio church in Bogotá, Colombia. Established in 1610, this church served as the mother church for the Society of Jesus in Nueva Granada and continues to be one of the most spectacular examples of Baroque architecture in the Americas. This 3D immersive environment incorporates archaeological and bioarchaeological data to allow the user to experience both the present and the past virtually. Archaeological excavations from 2016 to 2017 uncovered information about the early architectural history and subsequent renovations, as well as funerary contexts for over 150 human skeletal remains with

well-preserved funerary textiles. We use 3D scans of one individual's cranium to create a digital facial reconstruction, which will be used to incorporate this individual into the environment as a character guide that shares information with the visitor. This project blends together cultural heritage preservation, public history, archaeological narratives, and interactive design to serve as an immersive teaching tool that is accessible for broad audiences.

Wesp, Julie [201] see Trujillo-Hassan, Daniela

West, Catherine (Boston University), Trevor Lamb (Boston University) and Isabel Beach (Boston University)

[67]

Fixed if by Ice, Loose if by Sea? Harpoon Technology as Evidence of Hunting-Scapes in the Neoglacial Eastern Aleutian Islands

The effect of cooling climate during the Neoglacial period (3000–5000 BP) on societies in the Eastern Aleutian Islands is contested. Some archaeologists have argued that the appearance of toggling harpoon heads by 3000 BP indicate an adaptation to hunting marine mammals in an icy environment. This conclusion is problematic because toggling harpoons were frequently used in ice-free environments. Here, we examine whether the entire harpoon technological system—and particularly the foreshaft—are better indicators of past hunting-scapes, and we examine the implications this has for understanding hunting strategy in the Neoglacial Eastern Aleutians.

Westmont, V. Camille (University of Cambridge)

[82]

Ideas on an Interpretive Framework for Understanding Sites of Convict Leasing

Convict leasing was an exploitative, capitalist-driven system that successfully replaced race-based chattel slavery with class-based rented forced labor in the American South. The system sits at the intersections of race, masculinity, labor, economics, and modernity. It reveals the ways that widely condemned historical practices, such as enslavement, can be repackaged and made palatable for a modern society. In this paper, I explore the ways that materialities from sites of convict leasing, including artifacts, landscapes, and documents, can be used to understand the deeper ideological roles of convict leasing in reifying and upholding institutions of White supremacy, entrenched class systems, and unfree labor into the modern day. I bring together theories on Black feminist archaeology, Black geographies, materiality, abolitionism, critical race theory, and difficult heritage to illuminate the layered social meanings of convict leasing's material worlds. I apply these frameworks to the example of the Lone Rock Stockade, a late nineteenth-century convict labor stockade in Tennessee, in order to examine how explicit engagement with theoretical frameworks can transform our understandings of historical archaeological sites and cultural processes.

Westner, Katrin [121] see Rose, Thomas

Wheeler, Joe [172] see Silverman, Danielle

Wheeler, Kathleen (Retired)

[297]

Yes, Virginia, There Is a Nineteenth Century in Maine

Northern New England has a rich and lengthy postcontact occupation history. New England archaeologists, historians, and SHPOs long focused on the “First” periods of settlement, such as seventeenth-century forts and eighteenth-century maritime sites, while nineteenth-century resources were dismissed. As Terry's first PhD student, I entered a rigorous immersion into the study of nineteenth-century ceramics, utilizing

minimum vessel counts as units of analysis. Our lessons were held on Sunday afternoons at Terry's home, where I had access to her extensive library and vast personal collection of ceramics. Her instruction led to my 1992 dissertation on nineteenth-century urban deposits at three sites, then later formed the foundation for decades of contract survey of nineteenth-century homesteads, farms, and mills in Maine, New Hampshire, Vermont, and Massachusetts. Terry's contribution to my success in bringing recognition of these resources cannot be overstated.

Wheeler, Ryan and Kathryn Kamp (Grinnell College)

[100]

The Exploits of the JAE: Open-Access Publishing Meets Archaeology and Education

Education has become an important component of archaeology in all realms, from traditional teaching arenas in universities and K–12 schools to research to government and contract work. In 2017 the Robert S. Peabody Institute of Archaeology and the University of Maine, Orono, collaborated to found the *Journal of Archaeology and Education* (<https://digitalcommons.library.umaine.edu/jae/>), a peer-reviewed, open-access journal dedicated to disseminating research and sharing practices in archaeological education. The journal's founders recognize the significant role that archaeology can play in education at all levels and intend for JAE to provide a home for the growing community of practitioners and scholars interested in sharing their first-hand experiences and research. Since 2017, JAE has published 39 articles and two special issues with a total of 11,000 downloads. JAE's editorial board contend with issues around growing awareness and increasing submissions, as well as how to handle the ethics of human subjects research in environments where Institutional Research Boards are not always available and researchers are not consistently aware of the need to have their research vetted.

Wheeler, Ryan

[154]

Discussant

Wheeler, Sandra (University of Central Florida)

[246]

The Tiniest Burials: Fetal Burial and Personhood during the Late Roman Period in Egypt

Mortuary practices surrounding fetal-aged individuals are highly variable, providing opportunities for examining complex beliefs about personhood, social identity, and “wholeness” from cross-cultural and chronological perspectives. This paper examines the mortuary context of the unborn, or those individuals entering the mortuary landscape because of miscarriage, premature birth, or other factors within the Kellis 2 cemetery, in Dakhleh Oasis, Egypt. The unique hyper-arid environment has allowed for excellent preservation of human remains and evidence of bodily and funerary treatments. This cemetery represents early Romano-Christian mortuary practices where all individuals, regardless of age, were buried in a consistent mode of bodily treatment and placement in the landscape. Ten percent of the Kellis 2 juvenile population (46/463) are aged younger than 36 weeks of gestation, suggesting the death and treatment of these individuals had a meaningful impact on the lives of remaining family and within the cultural norms of the community. This context provides a distinctive and uncommon view into early Christian burial practices and how ideological beliefs about personhood extended across different levels of society. ***Images of human remains will be shown in this presentation.

Whelton, Kathryn (University of Central Florida), Emily Zavodny (University of Central Florida), John Walker (University of Central Florida) and Neil Duncan (University of Central Florida)

[67]

Evaluating Long-Term Trends in Seasonality and Land-Use Changes in the Postcontact Llanos de Mojos

The Llanos de Mojos region in the Bolivian Amazon has a long history of human occupation that challenges

long-held ideas about the nature of precontact communities. It has a tropical savanna ecosystem with very strong seasonality, resulting in annual cycles of flooding and drought. Large, long-term sedentary populations appear to have adapted to this environment by constructing extensive anthropogenic landscapes, including raised agricultural fields, which were eventually abandoned after thousands of years of sustained use. The exact timing and reason for the abandonment of raised-field agriculture is unknown, though some argue the arrival of Jesuit missionaries, domesticated livestock, and new agricultural practices in Mojos in 1683 CE played a significant role. This project utilizes stable oxygen isotope analysis of sediment cores to determine if the abandonment of traditionally managed landscapes can be attributed to environmental factors in addition to the cultural factors associated with the arrival of Europeans in the region. If extreme changes in expected seasonal climate patterns occurred, then environmental factors may have contributed to the changing land-use practices evidenced by the abandonment of raised field agriculture, vegetation shifts, and increased reliance on European domesticates.

Whitaker, Adrian (Far Western Anthropological Research Group Inc.)

[249]

Could Large Mammal Faunal Remains Provide Indirect Evidence of Precontact Landscape Management?

It is widely acknowledged that fire was used throughout the western United States as a landscape management tool. Direct archaeological evidence is rare and successful studies that identify Native American burning rely on multidisciplinary approaches. One such study in California by Lightfoot, Cuthrell, and colleagues used changes in the relative abundance of small mammal species through time as part of a broader argument that precontact Native American burning was used to maintain open meadows in what is now a forested environment. In an unrelated series of studies, Broughton has identified a pattern of increased hunting of artiodactyls in the Late period. Using a detailed biological habitat suitability model for black-tailed deer I examine whether Late period increases in artiodactyl indices in central California may have been driven by regular Native American burning of chaparral habitats. If these patterns can be demonstrated it suggests that faunal data (old and new) could provide evidence of widescale landscape management.

White, AJ (University of California, Berkeley) and Lisa Maher (University of California, Berkeley)

[139]

Paleoenvironmental Signatures of a Persistent Place at Kharaneh IV, Jordan

Paleoclimatic and paleoenvironmental data are pertinent to understanding the processes that form persistent places. This paper presents new physical and chemical geoarchaeological data, including faunal C and O isotopes, sediment composition, and geological survey data, from Kharaneh IV, a large Early to Middle Epipaleolithic site in eastern Jordan, and aggregates existing information to define the site's unique environmental qualities and form a narrative of climatic change on the Kharaneh landscape. In addition to confirming dry periods before and after the site's occupation identified by previous research, we find that environmental conditions during the site's thousand-year history were relatively stable, with the exception of a temporary period of enhanced precipitation during the site's Middle Epipaleolithic occupation. While other water sources may have been available in the region, we find that the site's reliability over a thousand-year period encouraged continued reoccupations of the site and contributed to the formation of a persistent place.

White, AJ [139] see Maher, Lisa

White, Andrew [326] see McCullough, Robert

White, Anthony [326] see Baxter, Carey

**White, Chantel (University of Pennsylvania), Grant Bruner (University of Pennsylvania),
Alessandra Dominguez (University of Pennsylvania), Jennifer Feng (University of Pennsylvania)
and Phoenix Strouse (West Chester University)**

[12]

Assessing Plant Use in the Early Upper Paleolithic: Macrobotanical Results from Mughr el-Hamamah, Jordan

The Mughr el-Hamamah (MHM) cave site, located on the Jordan Valley's eastern flanks, contains a prehistoric layer associated with Early Ahmarian artifacts. AMS ¹⁴C dates bracket the Early Upper Paleolithic (EUP) occupation between ca. 45 and 39 ka cal BP and are comparable in age to Ahmarian-associated layers in Kebara and Manot Caves. Excavations at MHM have revealed a rich assemblage of carbonized wood, nutshell, and seeds. A comprehensive macrobotanical sampling plan was carried out during the 2017 excavation season to collect carbonized plant material. After samples were floated in the field, they were sorted and analyzed at the Center for the Analysis of Archaeological Materials (CAAM) at the University of Pennsylvania.

Identification of the charred seeds and nutshell fragments from MHM provides detailed confirmation of the main botanical components of the EUP diet with an emphasis on edible legumes and pistachio nutlets, drawing an interesting comparison to the legume-rich assemblage from Neanderthal deposits at Kebara Cave, as well as other archaeological sites with preserved botanical material in the region.

White, Chantel (University of Pennsylvania)

[288]

Chair

White, Clifford

[36]

The Implementation and Distribution of Thermoregulatory Technology in the Paleoindian Period

Thermoregulation was integral to the survival of the first and subsequent people who inhabited North America following the Last Glacial Maximum. Successive climate fluctuations necessitated the implementation of technologies that increased the probability of human survival. Previous research has examined the timing of thermoregulatory technologies in the archaeological record and the potential relationship between these technologies and erratic climate fluctuations during the Younger Dryas cooling event. Bone needles in the North American archaeological record primarily coincides with the Folsom cultural complex between 12,610 and 12,170 BP. The known distribution of this technology across Western North America over a moderately brief period of time suggests a necessity for implementing and sharing thermoregulation technologies across different regions and elevations. Twenty-four bone needle fragments recovered from Locality I of the Hell Gap site in Goshen County of Wyoming are all associated with the Folsom cultural component at the site. The density of bone needle fragments from this component at Hell Gap, and at other Paleoindian sites in North America, shows how the necessity for thermoregulatory technology was implemented to combat climate change during the Younger Dryas to facilitate human survival.

**White, John (Texas A&M University), Jeffrey Rasic (National Park Service) and Mike Loso
(National Park Service)**

[120]

The Archaeology of Nataeł Na' and Its Implications for Landscape and Resource Use by Pleistocene Peoples in the Yukon-Alaska Borderlands

The multicomponent hunter-gatherer site Nataeł Na' represents the first evidence of Pleistocene-aged human occupation in the Copper River basin. One occupation dates to the Allerød interstadial and another to the late Younger Dryas climate reversal. To date, the Allerød occupation has been identified only by a small assemblage of lithic reduction debitage. The Younger Dryas occupation is represented by a more robust lithic assemblage recovered in association with a well-dated combustion feature. The limited nature of the excavation to date constrains the extent of interpretation that can be realistically applied to this assemblage, which has led us to employ a wide variety of analytical techniques during our investigation of the site. The location of Nataeł Na' makes the site a prime candidate for regional and interregional comparison of

the lithic technologies identified in the assemblage and the organization of those technologies. Viewing Nataef Na' from a landscape and even regional perspective has great potential to provide insight into the behavior and resource exploitation of the early inhabitants of the southern Yukon-Alaska borderlands. Our interpretations of the behaviors and technologies represented at Nataef Na' also raise interesting questions about the connection between this and adjacent regions during the Pleistocene.

White, Kirrily (University of Sydney)

[155]

From Trypillia to Tswana: A Global Perspective on Giant Low-Density Settlements

Early giant settlements such as Chaco Canyon, the Tswana “towns,” and the European *oppida* have long seemed anomalous to scholarship because they did not ally their vast extents with characteristics of conventional urbanism. These large, low-density settlements emerged periodically for more than 7,000 years across the globe. They occur far more frequently and in more diverse geographic areas than higher density settlements of similarly novel areal extents. Roland Fletcher (1995) identified that they functioned because by dropping to a low-density internal pattern they were not constrained in expansion by interaction stress or issues of communication. Without such constraint, they developed across a range of formal and operational characteristics, often with evidence of population mobility and within extensive regional interaction networks. But their expansions and persistence often appear somewhat random. Structurally, they were giant variants of common regional forms appearing within specific culture regions but ceasing to develop with region-scale systemic change. These settlements were both robust and vulnerable. More than 200 examples have been identified and there are many more. They constitute a human settlement behavior that we are only beginning to systematically explore.

White, Nancy (University of South Florida)

[165]

Archaeology of the Apalachicola-Lower Chattahoochee Valley

Archaeological synthesis in this neglected region (in northwest Florida, southeast Alabama, and southwest Georgia) provides alternative models of cultural adaptations over the last ca. 14,000 years. Paleoindian evidence is densest in the tributary Chipola River but extends to the coast. As post-Pleistocene sea-level rise pushed the river eastward, Archaic peoples adapted to climate change, developed the earliest ceramics by about 4500 BP, and deposited estuarine shell middens. By Middle Woodland times (ca. AD 300–700) mound ceremonialism included a fascination with light, exotic forms, and fancy imports but not yet any apparent economic stratification. All this waned as people began growing maize inland, with Fort Walton period agricultural chiefdoms emerging by AD 1000. Old World invaders arrived nearby 500 years later, then colonists, leading to major depopulation, the disappearance of aboriginal material culture, and a confused protohistoric record. Creek groups moved south into Spanish Florida, becoming Seminoles. Settlements, including the largest Maroon community in the US, were destroyed by the emerging American nation. Recent historical archaeology research includes lost Civil War forts; the short-lived antebellum boomtown of old St. Joseph (1836–1844); industrial, agricultural, and military sites; and the destroyed landscape after Hurricane Michael in 2018.

White, William (University of California, Berkeley)

[15]

I Didn't Get Here Because of My Trauma: I'm Here Because I'm Good at Archaeology

The monoraciality of archaeology perpetuates systems where many European American archaeologists assume archaeologists who are Black, Indigenous, and People of Color (BIPOC) have arrived because of affirmative action. Our presence is considered the result of traumatic lives that led to handouts; many think we were given scholarships, fellowships, and grants because of our BIPOC status and traumatic lives. While a range of BIPOC support resources are necessary and valuable, those of us who make it in archaeology did not become professionals because of the traumatic lives we've lived. This presentation discusses the pressure

BIPOC archaeologists feel to write about, research, and tell others about the traumas they've faced in their efforts to become a professional archaeologist. It extrapolates from Tina Yong's 2023 presentation on the "Trauma Essay" in college acceptance letters to examine how this is perpetuated in academia and professional archaeology. The talk ends with some suggestions for moving beyond this phenomenon.

White, William (University of California, Berkeley)

[40]

Discussant

Whitefield, Hans [151] see Windle, Morgan

Whitehurst, Sadie (National Parks Service), Tad Britt (National Center for Preservation Technology and Training) and Diana Greenlee (Poverty Point World Heritage Site)

[177]

Reviewing the Human Remains Detection Dog Workshop

The National Park Service's Center for Preservation Technology and Training (NCPTT) facilitated a workshop for archaeologists in May 2023 at the Poverty Point National Historic Landmark / World Heritage Site as part of an ongoing effort to research human remains detection (HRD) dogs for nondestructive archaeological investigations. HRD dogs supplement investigations by adding another layer of evidence to remote sensing surveys. NCPTT, the Friends of NCPTT, and Poverty Point hosted the workshop to expand the network between archaeologists and HRD dog handlers; review the theory and methods of canine search in different settings as the foundation for HRD; and conduct field exercises to demonstrate best practices to archaeologists. Additionally, data collected at Poverty Point historic cemeteries during field exercises, combined with past HRD dog and geophysical investigation results, provided insight on how results can vary with environmental conditions and different dog teams.

Whitley, David

[333]

Discussant

[156]

Chair

Whitley, David

[156]

The Ontology of Landscape and Hunter-Gatherer Rock Writing

Landscapes are cultural constructs, shaped by cognition and actualized in behavior. Hunter-gatherer landscapes are traditionally viewed in two terms: settlement patterns and systems, and related adaptive/subsistence niches and patches. While useful, these approaches embody the epistemological imperialism of Western archaeology, and they leave unexplained ritual landscapes. How then do we explain the locations of the most visible expression of hunter-gatherer ritual, rock writing? And how do we explain unusual massive concentrations of these sites, with two or three orders of magnitude more motifs and ritual features than typical? Native Californian ontological beliefs about landscape based on the nature and distribution of supernatural power and how it manifests on earth explain the logic of two major rock writing concentrations: Coso Range Numic petroglyphs and Carrizo Plain Chumash pictographs. These examples illustrate the coherence and consistency of Native Californian religious beliefs, thereby providing an avenue for an emic understanding of the archaeological record.

Whitley, Tamara (Bureau of Land Management) and Kristina Doyle (Bureau of Land Management)**[44]***Life in a Land of Little Rain: Historical Agricultural Landscapes on the Carrizo Plain, California*

The Carrizo Plain National Monument (CPNM) contains a large number of structures and features associated with historical agriculture on the Carrizo Plain. This largely intact cultural landscape spans a period of significance from the Homestead Act through industrial scale dryland farming. Historical and archaeological contexts have been developed for the monument, and four farm/ranch headquarter structures have been formally evaluated and determined eligible for the National Register of Historic Places. Ongoing use and maintenance of the larger CPNM, however, has the potential to adversely impact isolated, but potentially contributing, features such as grain tanks, water tanks and troughs, corrals, and fencing. As important components of the agricultural working landscape, the identification of the associations and context of these features is critical to delineating and understanding this cultural landscape and preserving its ability to convey its values. This poster describes and discusses the process of documenting these resources and developing a NRHP district nomination and resource management plan for protecting this historical agricultural landscape.

Whitley, Thomas (Sonoma State University)**[10]***Discussant*

Whitney, John [310] see Allen, Mitchell

Whitridge, Peter (Memorial University of Newfoundland)**[331]***Graffiti Atmospheres and the Durability of Transient Places*

Although simple tags are liable to appear anywhere, contemporary graffiti thrives in places that are marginal to everyday traffic, such as alleyways, rooftops, overpasses and vacant or abandoned structures. Even in these places graffiti is usually impermanent; other writers will eventually go over it or the wall will be buffed by authorities to discourage its proliferation. Despite this characteristic marginality and transience, favored locations may be used year after year, often precisely because they are abandoned, remote, concealed, protected from the elements, or otherwise suited to writing. Persistent graffiti sites emerge where the atmosphere is conducive, but mushrooming graffiti also helps to produce a suitable atmosphere, giving rise to discursively dense panels of overlapping text, color, and graphical fragments that envelop crumbling concrete, brick, and steel. Like most modern cities, St. John's, Newfoundland and Labrador, has accumulated many such sites, ranging in scale from abandoned factories and military installations to narrow downtown alleys, and many of these are haunted by a postindustrial atmosphere of anarchy and decay that graffiti both seeks out and helps generate.

Whittaker, John (Grinnell College), Kathryn Kamp (Grinnell College), Chuck LaRue (Independent Researcher) and William Bryce (Logan Simpson)**[306]***Atlatl Dating and Violence in Rock Art in the American Southwest*

Atlatl-related motifs are prominent in a limited area of the prehistoric American Southwest. The motifs include atlatls and darts and images relating to hunting and violence, all socially and symbolically important. While recognizing difficulties in dating rock art, the atlatl-related images are closely associated with styles and motifs dated to the Formative, early horticultural Basketmaker II cultures of the Colorado Plateau before about AD 700. They do not co-occur with bow-and-arrow depictions, and the few apparently narrative scenes of violence suggest small-scale social conflicts, rather than larger group warfare. Later cultural systems changed as regional populations grew, became more dependent on agriculture, and adopted the bow and arrow.

Whittaker, Joss [50] see Echavarri, Mikhail

Whittemore, Anna (Cornell University)

[185]

Where Are the “Interesting” Skulls? The Practice and Taphonomy of Modern Interaction with Human Remains in Open Tombs

Modern interaction with ancient human remains is near-ubiquitous in aboveground open-air tombs, used in the Andes during the late prehispanic period (ca. 1000–1532 CE). These spaces are host to a range of activities, from looting and sale of artifacts by professional huaqueros to exploration by local history enthusiasts. While—or perhaps because—all of these practices disturb the primary archaeological context, I argue that modern rearrangement and removal of artifacts and human remains are forms of mortuary practice that should be studied by archaeologists. Specifically, this paper uses a case study from recent fieldwork to investigate the practice of rearranging isolated crania in *machay* (cave) tombs in southern Ayacucho, Peru. I hypothesize that, rather than a random sample of crania from the tomb, these represent a collection that “looters” have curated and arranged to be viewed by future visitors. As such, the crania displayed in prominent locations, such as the mouths of caves, will feature higher rates of cranial vault modification, fractures, and other features that are visually apparent and/or evocative to laypersons. This study carries implications for surveys and surface collections at open sepulchers and argues that certain forms of what is typically termed “looting” constitute thoughtful engagement with cultural heritage.

Whittington, Stephen (National Mining Hall of Fame and Museum [Retired]) and Soren Frykholm (University of Michigan)

[160]

Neighborhoods on Cerro Amole, Oaxaca: Models for a Mixtec Cabecera

Intermediate levels of social organization—above the household, but below the entire settlement, city, or polity—are notoriously difficult to pinpoint in archaeological contexts, but they nevertheless represent a crucial frontier for building new archaeological theory to understand daily social life in the past. Ethnographic research demonstrates that informants recognize units such as the “neighborhood” and consider them important. In Mesoamerica, organizational units such as the Mixtec *siqui*, Aztec *calpulli*, and Maya *cuchcabal* were often formally recognized in social, military, and economic (especially tribute) systems. The mountaintop site of Iglesia Gentil on Cerro Amole, above the town of San Pedro Teozacoalco, was the *cabecera*, or administrative center, of Chiyo Cahnu, an important Postclassic Mixtec polity. Utilizing distributions of architecture and artifacts across the site based on data collected with GPS units from 2013 to 2017, three complimentary GIS-based models are evaluated for their ability to define neighborhoods.

Wholey, Heather (West Chester University)

[71]

Chair

Wholey, Heather (West Chester University)

[71]

Teaching and Learning Climate Change through Global Change Archaeology

Climate should be mainstream in education and be incorporated into all subjects because climate change is permeating. Many natural sciences are already centering climate literacy in coursework, but as the effects of climate change have become more visible and clearer, humanities, social sciences, and the arts are increasingly incorporating climate into their curriculums. Climate change education may take the form of both formal and informal learning and teaching and increasingly include immersive field projects and classroom activities using international case studies. Archaeology education already implements these approaches and is rich with insights relevant to environmental problem-solving due to its comparative nature, time depth, multidisciplinary perspectives, and interdisciplinary collaborations. Global-change archaeology

centers the archaeological record to the understanding of contemporary environmental problems. Incorporating global-change archaeology into all levels of curriculum can make clear human-environmental interrelationships and emphasize human adaptation and resilience from a long-term perspective. Engaging students with the climate crisis through global change archaeology can reveal the relevance of the archaeological record for addressing contemporary problems, such as the climate crisis. This poster will highlight examples that utilize scientific and cultural elements of the archaeological record as curriculum resources for teaching climate change within the framework of global-change archaeology.

Wholey, Heather [38] see Biehl, Peter

Whyte, Thomas (Appalachian State University)

[145]

Experimental Study of Hunter-Gatherer Base Camp Taphonomy in the Southern Appalachian Highlands

An experiment was undertaken to explore contextual and materials taphonomy initiated at the time of hunter-gatherer base camp abandonment in the southern Appalachian highlands. Acting out a fictional ethnography inspired by southeastern ethnohistorical accounts, 12 humans, accompanied by two dogs, made stone tools and processed subsistence items and deposited the remains in various contexts on an experimental site. Activities and deposits were mapped, and a motion-activated camera monitored scavenger activity for four weeks. Five years later the site was excavated. Smaller items had moved considerable distances, and most subsistence remains, especially bones of white-tailed deer, had been removed from the site by scavengers. This experiment reveals that precise reconstructions of human diets based on surface deposits are untenable.

Whyte, Thomas (Appalachian State University)

[274]

Discussant

Wiant, Michael [204] see Brown, James

Wibberly, Alaina (University of Chicago)

[231]

From Survey to Surveillance in the US-Mexico Borderlands

Extractive industries such as gold, copper, and lead mining anchored settler colonial expansion in southern Arizona through the nineteenth and twentieth centuries, initiating survey-based cartographic practices as colonial method. These now-abandoned mining landscapes have since been incorporated into the contemporary border security landscape as US Customs and Border Protection (CBP) expands its surveillance infrastructure in the region. The rugged terrain of the Arizona highlands has become an experimental zone for “virtual wall” techno-security measures, including networks of sensors, cameras, and drones that map CBP’s vision onto the landscape. It is these sites where the surveillance system touches down, however, that the legacy of the historic frontier structures border security logics in unexpected ways: the mining landscape affords sites of capture, refuge, and countersurveillance, distorting the surveillance fantasy of disembodied vision. At a methodological level, this paper interrogates the parallels between archaeological survey and the techniques of state surveillance, asking how we might square the view from above with the view from the ground. This paper also uses archaeology to ground surveillance infrastructure not just in its historical precedents, but in its material traces and dependencies, making visible an object that is often seen as a nebulous network of dispersed power.

Wichlacz, Caitlin (Arizona State University)**[255]**

A Curious Presence: Examining Salado Polychrome Production and Provenance in the Phoenix Basin of Arizona through a Multi-method Approach

Between ca. 1300 and 1450 CE, Salado polychrome (Roosevelt red ware) pottery production and use spread rapidly, then persisted across the US Southwest, intersecting diverse cultural and regional traditions, and creating a material pattern termed the “Salado phenomenon.” In Arizona’s Phoenix basin during the Hohokam late Classic period, Salado polychromes appear curiously, with high ubiquity but low frequency, and unaccompanied by many of the material signatures that underpin explanatory models for their production developed in adjacent regions. To better understand the distinct material and social relations that structured how Phoenix basin residents obtained Salado ceramics, a study of Salado polychrome production and provenance was undertaken, examining museum ceramic collections from nine sites. A suite of complementary chemical and mineralogical characterization methods, including neutron activation analysis ($n = 278$), electron probe microanalysis ($n = 60$), and ceramic petrography allows the assessment of compositional and technological variability, the number and nature of compositional groups, their possible relationship to source locations, and the degree to which composition cross-cuts ware and type categories. Beyond elucidating the production and distribution of these ceramics, this research aids in understanding the social and practical meanings of engagement with Salado practices and materials in the Phoenix basin Hohokam context.

Wicker, Nancy (University of Mississippi)**[91]**

Boundaries: Where Iron Age Archaeology Meets Medieval Art History

While interdisciplinarity in archaeology increasingly has blurred the borders between humanities and sciences, an additional boundary in archaeology exists between what is considered Iron Age and what is medieval. The terms have been defined largely from the Continental point of view. In the North, the Viking Age, ca. 800–1050 CE, is considered the last subdivision of the Scandinavian Iron Age and is marked as the period of transition from a non-Christian to a Christian worldview. This conversion, which occurred earlier in the South, is studied by scholars from many disciplines including archaeology, history, visual arts, and religion, with diverse research traditions based on disciplinary and national boundaries. In this presentation, I will discuss the vagaries of studying the material culture of Viking Age Scandinavia both as an Iron Age archaeologist and as a medievalist art historian.

Wiewall, Darcy (Antelope Valley College)**[237]**

Chair

Wiewall, Darcy (Antelope Valley College)**[237]**

Clearing Away the Cobwebs: The AVCAR Orphaned Collections and Innovative Undergraduate Research

The Antelope Valley Archaeological Repository (AVCAR) houses over 300 archaeological sites from the western Mojave Desert. These collections constitute over 40 years of compliance-based and salvage archaeological excavations led by Antelope Valley College and the Antelope Valley Archaeological Society. While these documented sites vary in complexity, quantity, and size, they resemble some of the most extensive excavations within the region. AVCAR collections are largely unanalyzed and most of the associated field work remains unpublished; hence, they meet the typical definition of “orphaned” archaeological collections. Furthermore, various curation methodologies known to be research precursors provide organic and meaningful encounters that inspire undergraduate research. In this presentation, I will outline the various management strategies and research designs applied to the AVCAR orphaned collections, which have promoted student stewardship and research at the community college level. Additionally, by uncovering the research potential of the AVCAR orphaned collections, students have gained valuable insight into the process of collaborative efforts between local tribal governments throughout the region. By

employing “community-based” archaeological practices for the AVCAR orphaned collections, students can develop pragmatic skills that promote a more sustainable form of archaeology in the region.

Wiewel, Adam

[177]

Chair

Wiewel, Adam

[177]

Brown v. Board of Education National Historical Park: Archaeological Investigations and Geophysical Survey
Brown v. Board of Education National Historical Park commemorates the US Supreme Court’s 1954 decision to end legal racial segregation in public education and preserves significant resources like Monroe Elementary School in Topeka, Kansas. Before opening to the public on the ruling’s 50th anniversary, the Midwest Archeological Center completed several investigations of the former school and adjacent grounds. Among them were a geophysical survey in 1999, ground-truthing excavations in 2000, and eight archaeological monitoring projects between 2001 and 2003. A new series of ground-penetrating radar and resistance surveys were undertaken in 2021, the results of which were tested as part of a field school last year. Among the findings are the foundation of the first Monroe Elementary School, which served African American students from 1874 to 1927; remnants of contemporaneous homes that stood where the extant school building would later be constructed; and outbuildings, likely a series of privies associated with the first school. Combined with the Center’s earlier investigations, this research sheds light on a working-class African American neighborhood from the turn of the twentieth century that developed in association with the Civil Rights movement of Topeka.

Wiewel, Adam [177] see Allen, Forest

Wiewel, Adam [177] see De Vore, Steven

Wiewel, Adam [177] see Moody, Jacob

Wiewel, Adam [177] see Watt, David

Wigen, Rebecca

[274]

Discussant

Wiktorowicz, Conner [270] see Jankiewicz, Stephen

Wilcox, Daniel (University at Albany) and Christopher Wolff (University at Albany)

[99]

Prepping for The End: How Changing Fears Impacted the Use-Lives of Fallout Shelters

People’s fears can have an impact on decision-making, how people interact with their surroundings, and how they design structures. This is something important to consider when analyzing the archaeological record. The current study contributes to understanding how people’s fears impact construction and maintenance of architecture by examining Cold War fallout shelters from New York in the Albany area. In reaction to fears of the end of the world resulting from nuclear war, both private and public shelters were constructed for protection and in hopes of survival. Historical documents and what remains of the shelters can help us understand the many fears people were dealing with when shelters were built, how people were meant to interact in these spaces, and how fears and the spaces themselves changed as the Cold War went on and after it abated. This study has broader implications about how fear can be reflected in building design and potentially the archaeological record, and how changes in cultural fears alter how spaces are utilized as the focus of those fears shift toward new perceived threats.

Wilcox, Shante (North Carolina State University)**[43]***Misuse and Abandonment of African American Cemeteries: How Social Inequalities Persist in Death in the Post-Civil War Southeast*

This study explores how African American cemeteries in the Southeast have faced environmental and human threats, which makes it difficult for descendant communities to piece together their backgrounds. American law offers some protections against the intentional desecration of cemeteries, yet the maintenance and landscaping of individual cemeteries is left to the responsibility of local officials, resulting in a lack of preservation that disproportionately affects historically African American burial spaces. The Geer Cemetery in Durham, North Carolina, and the Oberlin Cemetery in Raleigh, North Carolina, serve as case studies where volunteer organizations intervened and currently work to preserve the integrity of the grave markers, collaborate with descendants, and, in the case of Geer Cemetery, obtain a National Register nomination. Collaborative research with these organizations focuses on returning agency to the interred through GIS mapping of grave markers, genealogical research to aid in location of descendants, and comparative research of vital records with local, historically Whites-only cemeteries to illustrate differences in health. Finally, this research will be used to create a fictive, bio-historical narrative to engage the broader community and encourage continued preservation of these burial spaces.

Wiley, Trevor (Boston College)**[22]***Inter Duo Maria: Rethinking Early Medieval Settlement in the Forth-Clyde Zone through an Environmental Lens*

The twin estuaries of the Firths of Forth and Clyde in southern Scotland boast a wealth of evidence for studying early medieval settlement. The modern population density around Glasgow and Edinburgh has resulted in a relatively large amount of data from rescue excavations and surveys compared to other parts of northern Britain. However, the societal shifts and settlement changes which marked the transition from the Roman-dominated Iron Age to the Early Middle Ages remain poorly understood and are often placed in simple ethnic frameworks and conquest narratives. New excavations hold great promise for understanding settlement change and the development of new communities, especially in relation to local landscapes and the environment. My paper draws together several examples of such settlements, both older and recently excavated, to think about how they used their local ecological landscapes to build new communities and lifeways in the early medieval period. In turn, it then explores what these settled landscapes mean for our understanding of early medieval southern Scotland, and queries whether older models of conquest-driven cultural shifts are sustainable moving forward.

Wilford, Sam [72] see Smith, Catherine

Wilk, Richard**[21]***Discussant***Wilke, Detlef, Aika Katharina Diesch (University of Bamberg) and Joachim Lorenz (Karlstein a.M.)****[255]***The Roman, Medieval, and Early Modern Potting Site of Dieburg South of Frankfurt/Main, Hesse, Germany, and Its Geochemical Pattern with a Stable Heavy Mineral Anomaly*

As part of an extended ceramic settlement analysis with 10 medieval find complexes in the lower Main depression, we studied Roman and late medieval to early modern pottery from Dieburg (district of Darmstadt), which is the only site with workshop wasters in the larger region. The Dieburg wares exhibit a characteristic anomaly of Ti, Nb, and Zr, which is also found in oil shale sediments (black-pelite/kerogenite)

of the Eocene maar lake of Messel, just 6 km to the west of Dieburg. The Messel Maar is one of several volcanoes in a small north-south stretched hill, which separates the lower Main depression from the Rhine rift valley. We used nondestructive XRF for pottery analysis and XRF and XRD for studying clay mineralogy. The late medieval potters were for sure not aware of the potential volcanic origin of their clay, but focused on this low iron, low cation containing raw material for the production of high-quality lead glazed stove tiles and loam slipped tableware, which was traded over a great distance.

Wilkerson, Haley [175] see Schaefer, Jonathan

Wilkerson, Haley [269] see Turney, Kathryn

Wilkes, Margaret (Meg) (NPS Northeast Archeological Resources Program), William Griswold (NPS Northeast Archeological Resources Program), Joel Dukes (NPS Northeast Archeological Resources Program), Wayne Page (NPS Northeast Archeological Resources Program) and Jacob Ulmer (Indiana University of Pennsylvania)

[177]

The Skirmish of Jumonville Glenn 1754, Fort Necessity National Battlefield

Early on the morning May 28, 1754, Lt. Col. George Washington and Mingo allies exchanged fire with a party of French soldiers encamped in a glen, close to the English base camp at Great Meadow, in southwestern Pennsylvania. This skirmish, at what is now known as Jumonville Glen, was the first conflict between the British and French that led to the French and Indian War. Battlefield archaeological investigation was conducted in the Jumonville Glen at Fort Necessity National Battlefield in the spring of 2023. The investigation focused on locating the site where the skirmish took place and demonstrates that there is much to learn when using an integrated approach of technological field mapping and artifact analysis. This poster presents the methods used to overcome mapping challenges and dives into a high-resolution 3D spatial environment to analyze and interpret this brief, yet world-changing, exchange of fire.

Wilkes, Margaret (Meg) [177] see Griswold, William

Wilkie, Laurie (University of California, Berkeley)

[115]

Discussant

Wilkin, Shevan (Institute of Evolutionary Medicine)

[215]

Using Proteomics to Identify Ancient Pastoralism

Biomolecular analyses (proteins, stable isotopes, lipids, and DNA) have been integral in identifying the economic roles of domesticated animals in archaeological contexts. Materials such as human remains, dental calculus, ceramic matrices, and archaeological residues can provide valuable information on which animals were used for primary and secondary products, as well as determining which tissues were specifically used or consumed. While protein analysis has been more recently developed than the more well-established lipid and DNA analyses, the method offers newly possible insights. The combination of species and tissue specific information that amino acid sequences provide has been critical in clarifying which animals, and their products, were consumed by archaeological populations. Recovery and analysis of proteins from archaeological materials has been especially useful in contexts that suffer from either a lack of recovered faunal material or poor levels of preservation that makes zooarchaeological identifications challenging. Recently, this method has been used to illuminate the spread of milk use on the Bronze Age Eurasian steppe, to the Tibetan Plateau, and into Eastern and Southern Africa. Here, we will detail several projects that have increased our understanding of ancient dairy pastoralism across these regions as exposed by protein analysis.

Wilkinson, Darryl (Dartmouth College)**[146]***Moderator***[146]***Discussant*

Willard, Scott [101] see Hawkins, Rebecca

Williams, Dane**[205]***The Chatelaine, Gender, and Diagnostic Artifact Use*

Chatelaines suspend multiple items to be employed for such purposes as grooming, tools, or keys and have been widely used from before the Roman occupation of England to well after the ninth century. Additionally, they have been used to determine gender identity within Anglo-Saxon burials. By examining the chatelaine's use as a diagnostic measure of gender within a culture and the resulting limiting interpretations, it will be shown that this artifact is not gendered in its overall usage and should cease being used to determine identity. Further, examining gender politics and the use of diagnostic artifacts, multiple long-held biases could be resolved, allowing for a greater understanding of gender identities, societal norms, and overall culture. The implications of this could affect both Anglo-Saxon studies and long-held cultural paradigms worldwide. Determining the use of diagnostic artifacts, such as the chatelaine, to arbitrarily assign gender identities is antiquated; the use of current research to create a more honest examination of identity when examining the material culture of burials is required. This research framework can have impacts on multiple levels ranging from feminist perspectives within history, heritage tourism, and the overall public education about the Anglo-Saxon culture.

Williams, Elizabeth (University of New Orleans)**[131]***Crucibles in the Antebellum Assemblage and Imagination: Unique Finds from a French Quarter Archaeological Investigation*

In 2017, the University of New Orleans located two privy shafts in a French Quarter house lot: one brick-lined privy shaft superimposed on the other unlined privy pit. The contents of the two fill episodes were temporarily distinct, one from the early nineteenth century and the other from the mid-nineteenth century. Mixture between the contents from the two privy shaft features limited in-depth interpretation of the features and their tangled assemblages, but identification of multiple crucibles from the younger deposit are interpreted as unique artifacts from this antebellum household. Without clear avenues of comparative artifact analysis, we reverted to asking basic research questions about why the crucibles could have been in the assemblage in general. By examining data from portable X-Ray fluorescence scans, anecdotes from historical newspapers, and historical primary source documents, this paper examines the role of the crucible in antebellum America—its uses, its potential, and its multiple connotations in a period marked by capital development and risk, Victorian obsession with morality and crime, and rapid technological advancement. Combined with the transition of commercial cottage industries to industrialized factories, these crucibles are part an integral transformation of the material culture of the antebellum period.

Williams, Elizabeth [131] see Godzinski, Michael

Williams, Joey (University of Oklahoma), Rui Mataloto (Câmara Municipal de Redondo) and Karilyn Sheldon (Western Iberia Archaeology)**[26]***Quis Custodiet Ipsos Custodes? Indigenous Responses to Roman Colonial Surveillance in Alentejo, Portugal*

If visibility is undertheorized in archaeology, then invisibility is doubly so. This paper investigates the avoidance of surveillance in a colonial context. The central Alentejo, Portugal, was, in the first century BCE, home to watchtowers established under the new Roman administration of the region. In this remote corner of Europe we can see the remains of a surveillance system and attempts at avoiding and countering it by indigenous Alentejans. In the decades following the Roman conquest of the peninsula, sites visible to Roman watchtowers were abandoned and new settlements established in areas invisible to them. The towers' surveillance system is reconstructed using viewshed analysis, and the use of that system in claiming territory is examined. Indigenous sites, such as Monte do Outeiro, Cabeça de Vaiamonte, and Rocha da Mina are considered for their ability to avoid observation by Roman authorities. Invisibility to the panoptic imperialism of the new Roman regime was just one element of nearly two centuries of resistance to imperialism in western Iberia. Yet the success of these towers resulted in the reorganization of the region into the province of Lusitania and the use of surveillance in other colonial frontiers and carceral spaces of the Roman Empire.

Williams, Justin

[14]

Archaeological Games Don't Have to Be Fair, and Breaking the Rules Is Okay

Many game players work under the assumption that all games need to be fair and balanced. Additionally, many assume that rules-based actions are at the center of gaming. This, however, is not the case when using games in the classroom. Having used games in the classroom for over 10 years, I've concluded that the best lessons are learned from unfair games. Often the social interactions that take place outside the rules can be more informative than moves made within the game. Here I outline several of my archaeological game-based activities and how I've changed them over the years. Additionally, I suggest how non-game mechanics can aid in student learning after the activity. Many of these insights come not from my archaeological training, but instead from my over 30 years of experience playing board games and roleplaying games.

Williams, Lana [122] see Batres, Kimberly

Williams, Makayla (Augustana University), Phyllis Johnson (Augustana University) and Kristen Carlson (Augustana University)

[265]

A Preliminary Analysis of Bijou Hills Quartzite Blades from Site 21RK82

This poster presents a preliminary analysis of blades derived from Bijou Hills quartzite, also known as Ogallala orthoquartzite, recovered from site 21RK82, a newly identified multicomponent site located within Lone Tree Heritage Farm in Rock County, MN. This study aimed to identify the geological attributes, function, and chronology of these artifacts through a comparison to lithic tools from throughout the Great Plains using previously conducted archaeological reports and regional geology.

Williams, Patricia and Miriam Belmaker (University of Tulsa)

[145]

The Potential for Using Long Bone Measurements to Determine Breed of Gallus gallus domesticus and Its Implications for the Archaeological Record

Poultry remains are often found in archaeological excavations and while the species can usually be identified, there has been little research on breed identification or purpose (egg production vs. meat production). This research aims to determine if differences exist between the long bone measurements of modern chicken breeds which can be useful for the archaeological record. We collected specimens of modern breeds (Silkie $n = 9$; Ameraucana $n = 8$; and OEG $n = 6$), skeletonized them, and took measurements of the femur, tibiotarsus, and tarsometatarsus according to published guidelines. Preliminary results show the femur greatest length (GL) could distinguish among breeds (ANOVA $F = 4.409$ $df = 2$ p -value = 0.0251). Tukey's pairwise comparison indicated that femur GL could distinguish between OEG and Ameraucana (p -value =

0.03) and between OEG and Silkie (p -value = 0.05). There is no difference between Ameraucana and Silkie. A principal component analysis on 12 linear measurements and seven ratios shows that the 1st PC (68% of the variance) separates between the Ameraucana and OEG/Silkie group, and the 2nd PCA (31% of the variance) separates between OEG and the Silkie/Ameraucana group. While results are tentative, they suggest the potential of using the long bone size and shape to differentiate between poultry breeds.

Williams, Patrick Ryan (Arizona State University)

[50]

Chair

Williams, Patrick Ryan (Arizona State University) and Laure Dussubieux (Field Museum of Natural History)

[86]

Establishing the Elemental Analysis Facility: Reflections on 20 Years of Research

With funding from the National Science Foundation, the Elemental Analysis Facility at the Field Museum has advanced research projects in archaeological chemistry to study research on trade and exchange, examine craft production, and assess the nature of archaeological materials. Established in 2004, the EAF is housed in one of the world's great natural history museums, and its labs promote research not only on museum collections but also on objects from collaborating institutions and researchers. Applications from techniques including laser ablation–inductively coupled plasma–mass spectrometry (LA-ICP-MS) and portable X-ray fluorescence (XRF) have been instrumental in this work. Collaborative projects have ranged from explorations of glass bead production and exchange to sourcing earthenware ceramics and developing portable laser ablation systems. Dozens of publications and large databases have been built, the latter of which provide for large-scale comparative analysis of exchange systems on continental scales. In this paper, we highlight the efforts to establish the EAF in 2004 and the funding models and structural framework that has led to its success.

Williams, Patrick Ryan [86] see Nash, Donna

Williams, Patrick Ryan [86] see Sharratt, Nicola

Williams, Philip and Joseph Kinney (Vermont State University)

[203]

Tanks of Vermont: Using 3D Imaging of Oversized Artifacts and Oral Histories to Build Community Engagement

The use of 3D imaging within archaeology is often focused on the modestly sized objects and artifacts that form the basis of most museum or research collections. With the appropriate instrument, however, even very large objects can be effectively imaged and used in both research and outreach contexts. In this poster, we present the results of a project designed to capture oversized artifacts of US military history, and accompanying stories. Veterans of Foreign War (VFW) halls throughout the state of Vermont often feature a tank outside, a testament to the technology and methods of warfare in the twentieth century. Using an Artec Leo 3D scanner, digital models of a variety of these tanks have been created and allow for detailed exploration of how size and design changed through time. Oral histories collected from veterans or their family members during the lengthy scanning process provide compelling personal counterpoints to the digital models and strengthen linkages between the university and surrounding community.

Williams, Reylynne [88] see Medchill, Brian

Williams, Robert

[279]

Tornadoes as an Impetus of Social Change in the Eastern United States

Mississippian and related sedentary settlements in the eastern United States often appear unstable in the archaeological record. The eastern United States is also in the most tornadically active area on earth. Tornadoes have been an impetus of settlement and social change in both the historic and modern era. Using 50 years of data collected by the National Weather Service, I demonstrate that it is probable that tornadoes effected many precolonial settlements in the American South. These effects could further expand on the unstable nature of Mississippian settlements, polities, and region as a whole.

Williams, Veronica (CONICET-UBA), Kevin Lane (UBA-CONICET) and Cecilia Castellanos (UNSA-CONICET)

[193]

Roads and Changing Mobility in Northwest Argentina (AD 1400–1800)

Mobility defines human behavior; roads make that mobility possible. We study human mobility along route networks in an area of the Middle Calchaquí Valley, Salta Province, Argentina, called La Hoyada Quebrada, a natural connection route to the puna. Archaeological research highlights the fundamental role of high ravines and valleys for communication between different environments, since at least the first millennium CE. Additionally, historical documents and secondary sources attest to the continued use and importance of this area as a transit zone until well into the twentieth century. As such, our case study focuses on analyzing the development of roads and networks in La Hoyada at two sequential periods in time: the Inka and the Colonial periods. La Hoyada incorporates an important Inka road segment that connects the Calchaqui Valley with the puna and then continues into the saltpans, linking this area with the Atacama Desert and northern Chile. The road segment included several ancillary structures, such as way-stations (*tampu*), that were then reused subsequently. With the introduction of the Spanish colonial system, this entire area became part of the Hacienda de Calchaquí, which had land dedicated to agriculture and pastures for the fattening of cattle that were then taken to Upper Peru.

Williams-Beck, Lorraine (Universidad Autónoma de Campeche) and Alejandro Villalobos Pérez (Universidad Nacional Autónoma de México)

[32]

Paul Gendrop's Río Bec, Chenes, and Puuc Architecture: New Insights after 40 Years

While certain Northern Maya Lowland architectural characteristics remain constant for these three peninsular stylistic “entities” defined by Paul Gendrop, such as few dynastic hieroglyphic monuments, ballcourts or E-Group complexes, the past 40 years have revealed many new, insular features: zoomorphic mask elements adorning massive monumental stairways, myriad deity characters other than “Chahk” enshrined in zoomorphic portals, and pan-regional construction elements that define massive temples and palace structures. This talk will highlight monumental temple and palace features in Río Bec’s Chicanná, Chenes urban centers Hochob and Santa Rosa Xtampak, and Puuc’s splendid Adivino and the Nunnery Quadrangle in Uxmal. While hieroglyphic programs give way to socio religious or ideological rather than individual dynastic display, each zoomorphic portal variant portrays distinct deity personalities from site to site and from region to region. Few ballcourt elements throughout the former Central Yucatán regional variants play a novel functional paradigm for this architectural assemblage. And finally, we will discuss whether those elements present distinct yet temporal and progressively complex “evolutionary” transitional Classic period manifestations from region to region, or if they are local variations of other key architectural social indicators that persist throughout time in the entire Maya Lowlands.

Willis, Mark (Flinders University)

[332]

Change Detection Modeling at Eagle Nest Canyon

This paper investigates the use of drone-based 3D photogrammetry for mapping and monitoring landscape changes at Eagle Nest Canyon. Mapping before and after an extreme 2014 flood enables change detection modeling (CDM) using geographic information systems (GIS). By comparing elevation data from pre-flood and

post-flood DEMs, the study quantifies alterations caused by the flood. Results indicate significant changes in canyon bottom topography, with implications for site preservation and archaeological deposits. The research highlights the broader significance of using drone technology and GIS techniques for understanding landscape dynamics and potential impacts on archaeological sites, offering insights into recurring flood effects. The study also compares newly acquired drone-based lidar from the canyon with the older datasets.

Willis, Mark [220] see Brown, David

Willis, Mark [326] see Wurtz Penton, Michelle

Willis, Staci, Heather Thakar (Texas A&M University) and Massimo Capulli (Università degli Studi di Udine)

[29]

Cordage as Ship Fastener: The Roman-Era Northwestern Adriatic Tradition of Sewn Boats

Across the globe and over the millennia, cordage has been used as a key element to fasten the hulls of wooden plank boats and ships. As such, cordage has been an integral element of naval technology. Furthermore, the communal nature of constructing sewn plank boats arguably puts cordage at the heart of community identity-building among the builders themselves. This paper will explore both the technological and social aspects of cordage as ship fastener through an examination of a distinct tradition of sewn boat building that persisted during the Roman period along the northwestern coast of the Adriatic Sea, which stands in contrast to the mortise-and-tenon joined boats and ships that dominated the contemporary Mediterranean world. In many ways, the cordage used to bind fast the hull planking of northwestern Adriatic sewn boats provides insight into ancient lifeways. It has helped refine chronologies for the manufacture and repair of the vessels. It serves as a remnant of the decision-making strategies of the community of builders. And the raw material from which it was spun, often an import from the western Mediterranean, ties the builders into the colonial machinations of the Roman Empire.

Willis, William (University of Nevada, Las Vegas) and Sarah MacIntosh

[103]

Leaving It Where It Lies: How Noninvasive Archaeology Has Contributed to Recent Findings on the Shivwits Plateau

The landscape of archaeological research is rapidly changing in the United States which requires a paradigm shift in how we (as archaeologists) conduct our trade. This poster recounts the major successes that noninvasive survey methods have produced for researchers on the far southern Shivwits Plateau of northern Arizona. Focusing on the Virgin Branch Puebloan period of occupation, we highlight the wealth of information that has been gathered through infield analyses conducted at archaeological sites in the area and make suggestions on how archaeologists can become better stewards of the past amid changing professional and policy norms.

Wilson, Carrie [253] see Pauketat, Timothy

Wilson, Grant (PKKP Aboriginal Corporation), Burchell Hayes (PKKP Aboriginal Corporation), Terry Hayes (PKKP Aboriginal Corporation) and Jordan Ralph (PKKP Aboriginal Corporation)

[235]

Securing the Future for PKKP through the Remediation of Juukan Gorge and Beyond

Following the destruction of Juukan Gorge, the PKKP Aboriginal Corporation led the Juukan Gorge Remediation Project, which saw the rehabilitation of the broader Juukan Gorge area within line of site from the Juukan-2 rockshelter. This paper is an exploration of those rehabilitation efforts, which includes the re-excavation of Juukan-2, and the negotiation of a co-management agreement over mining operations. Beyond the physical rehabilitation, the PKKP Aboriginal Corporation had to act fast to build a working relationship

with Rio Tinto that would last, and that would ensure another event like this destruction would never happen again. Through a co-management approach, the PKKP Aboriginal Corporation has been able to agree to a new working arrangement that gives Traditional Owners an equal say over what happens on their Country, particularly where heritage approvals and impacts are concerned.

Wilson, Grant [235] see Ralph, Jordan

Wilson, Jeremy [61] see Polk, Sara

Wilson, Kathleen and T. L. Thurston (SUNY University at Buffalo)

[91]

The Cross in the North: Pictish Christianization in Light of the Northern European Experience

Christianization in Northern Europe's first millennium CE has been intensively studied by numerous disciplines and is often viewed as a cause or outcome of social, political, and economic changes. Christianity arrived at different times through differing processes, far better understood in some areas—e.g., Scandinavia—compared to Scotland, where it arrived during Pictish ascendancy in the region. As elsewhere, hagiographies shed some dim light from the proselytizing perspective, but their reception by the indigenous Picts and the impacts on their society remain opaque; the Christianized Picts were displaced by later groups, and thus there is no continuous protohistoric to early historic tradition preserved. Given the archaeological evidence of local and long-distance interactions between the Picts and their contemporaries in Ireland, England, Scandinavia, and the Continent, we examine several Christianized Pictish sites to ask how religious change in neighboring areas might inform research questions and hypotheses about possible developments in Pictland.

Wilson, Kurt (University of Utah), Kenneth Vernon (Center for Collaborative Synthesis in Archaeology), Wim Cardoen (University of Utah) and Simon Brewer (University of Utah)

[107]

Approximate Bayesian Computation Evaluation of the Interactive Effects of Climate Change and Subsistence Economic Intensification on Precontact Population Dynamics in Western North America

Past population change is connected to significant shifts in human behavior and experience, including landscape manipulation, subsistence change, sedentism, technological change, material inequality, and more. However, population change appears to result from a complex interplay of human-environment interactions that feedback on each other, influencing and simultaneously impacted by processes such as subsistence intensification and climate change. Here we explore complex system dynamics of population change using theoretical and Approximate Bayesian Computational modeling combined with the archaeological record of the past 4,000 years in the Colorado Plateau and Great Basin regions of western North America as case studies to identify causal relationships and the different manners in which climate change may have interplayed with subsistence economic intensification and population dynamics. Using standard distance metric evaluation on the performance of 1,000,000 simulations compared with reconstructed past population sizes in each region reveals how climate change impacting landscape productivity can influence carrying capacity and structure population growth such that, when populations reach carrying capacity (Malthusian ceilings), intensification in their subsistence economy can send feedbacks into the socioecological system spurring rapid, differential, population growth. Comparisons of the two regions highlights how varied socioecological circumstances can produce alternative pathways to, and limitations on, population expansions.

Wilson, Kurt [242] see Vining, Benjamin

Wilson, Nathan (Universidad Veracruzana [UV]) and Philip Arnold (Loyola University Chicago)

[163]

Obsidian across the Formative–Classic Period Transition at Teotepac, Veracruz, Mexico

This paper focuses on obsidian at the site of Teotepac, Veracruz, Mexico. Specifically, we discuss importation and consumption patterns during the Formative–Classic period transition (Late Formative to Early/Middle Classic period). Overall, the consumption of obsidian (a raw material not available locally) at Teotepac tends to reflect larger regional and Gulf Coast-wide trends. However, the persistence of obsidian from the Guadalupe Victoria, Puebla source as a prominent part of the Teotepac lithic assemblage well into the Classic period stands out as rather anomalous. We discuss this situation and provide a few possible explanations for the continued importance of Guadalupe Victoria obsidian at Teotepac.

Wilson, Tyrone [7] see Nystrom, Ken

Wilson, Dianna [262] see Lewis, Michael

Windle, Morgan (ROOTS Cluster of Excellence, Kiel University), Henny Piezonka (Freie Universität Berlin), Hans Whitefield (Akademie der Wissenschaften und der Literatur), Tumurbaatar Tuvshinjargal (National University of Mongolia) and William Taylor (University of Colorado, Boulder)

[151]

Understanding Reindeer Riding in the Archaeological Record of Northeast Asia through Ethnoarchaeology

Although the innovation of reindeer transport transformed societies across Northeast Asia, tracing the prehistory of reindeer domestication and riding has proven particularly challenging. Recent cross-species archaeozoological research has built an expanded paleopathological toolkit, but to date there are few mechanisms to understand the role of mounted reindeer riding in the deep past. Here, we present osteological insights from domestic reindeer in northern Mongolia, where mounted riding remains an important mode of transport in pastoral lifeways of the Tsaatan community. Our study of modern skeletal material suggests that reindeer riding produces recognizable alterations to the skeleton, including left-biased asymmetry, pathological changes and deformation to the thoracic and cervical vertebrae, and exostoses of the lower limbs. Comparison of reindeer tack and skeletal pathology with those from domestic horses shows key differences that may reflect the unique modality and equipment used in of reindeer riding and help trace the origins of this important innovation in archaeological contexts across prehistory.

Winkler, Chloe [200] see Phillips, Amy

Winnicki, Liv (Binghamton University)

[167]

Chair

Winnicki, Liv (Binghamton University)

[167]

The Diné Kin Ya'a Community

Kin Ya'a (towering house) is a prominent Chacoan great house that was the center of large community in the eleventh and twelfth centuries. This area has been utilized by the Navajo (Diné) over the course of two or more centuries. Nevertheless, there has been a shortage of research done on the Diné occupation of this particular region. According to oral histories within the Diné community, Kin Ya'a is the ancestral origin of one of the four original Diné clans. Kin Ya'a is an important archaeological site that features prominently in numerous oral histories recounted by the Diné, particularly in relation to ceremonies such as the "Excess way" and "Blessingway" (Fransted 1979). This research aims to examine the archaeological remains of Diné homesteads, agricultural sites, and shrines within the designated region. In my research, I employ

ethnohistorical methodologies, engage in conversations with local communities, and conduct pedestrian surveys. I intend to examine the changing significance of the Kin Ya'a region. What are the historical changes in Diné land use within this region? How have Diné perceptions of Kin Ya'a shifted throughout time—or remained the same?

Wintch, Kenny [112] see Duwe, Samuel

Winters, Kyle (University of Mississippi Medical Center), Rossana May (Kaxil Kiuic AC) and George Bey III (Millsaps College)
[261]

Vessels and Bones: Ritual Offerings from the Grupo Kuche Palace Throne Room

During the PARB project's 2023 excavations of the Terminal Classic (AD 800–1000) Grupo Kuche palace throne room (N1050E0815) at Kiuic, we unearthed two major and distinct ritual offerings. The first was thought to be a lip-to-lip cache located on the northwest corner near the top of the structure beneath a collapsed audience chamber. It was later revealed to be a secondary burial containing several more intricate vessels, including those with incision work, cloisonné decoration with maya blue pigment, and a carved fine-orange piece from the Gulf Coast. The second was a series of dedicatory vessels and artifacts found in excavations below the plaza floor directly in front of the structure's eastern staircase. Here, we identified at least 12 but upward of 20 vessels given the amount and variance of vessel fragments recovered. The associated artifacts were numerous pieces of shell, obsidian, chert, speleothem, carbon, quartz, and organic materials, including worked shell earrings, chert and obsidian tools, and residual food stuff. In this paper, we discuss the reasons, meanings, and importance of such ritualized behavior in better understanding the inner workings of both the throne room and palace at Kiuic. ***This paper and presentation will contain images of human remains.

Winters, Kyle [261] see Bey, George III

Wisner, Meredith (Salt Lake Community College)
[2]

Not Biting Off More Than We Can Chew: Experimental Archaeology in an Online Classroom

Experimental archaeology is a valuable tool for investigating the past and can be used to develop hands-on, high-impact learning opportunities for undergraduate students, helping to demystify the scientific process. Assigning such activities can also address some of the assessment challenges posed by the use of generative AI in student work. In the fall of 2023, community college students enrolled in an online world prehistory course engaged in experimental projects related to food processing and technology. This paper explores the scaffolded approach taken to guide these early-career students as they selected, conducted, reflected on, and showcased their experiments through online portfolios. Successes and challenges of this approach in the online classroom are discussed, along with recommendations for adapting it to other settings. Taken in small bites, hands-on experimental projects offer a digestible way for students to connect with the past in creative and rewarding ways.

Wisner, Meredith (Salt Lake Community College)
[2]
Chair

Wisner, Gavin [52] see Bryce, William

Witcher, Robert (Antiquity)**[63]***Discussant***Witelson, David (Rock Art Research Institute, University of the Witwatersrand)****[156]***Best Foot Forward: The Social Significance of Cattle Forelegs in South African San Rock Art*

Rock paintings of cattle raids are common in South Africa's southeastern mountains. Traditionally, such scenes are thought to illustrate some degree of conflict between two groups. The postures of the cattle depicted in the same scenes have been interpreted as showing movement such as walking or being driven from one place to another. Such art-historical interpretations overlook not only the robust tradition of ethnographically informed rock art research in South Africa but also the embodied symbolism of cattle themselves. In African farmer and agropastoral societies, it is the chief who receives particular "cuts" or pieces of a slaughtered or hunted animal. This raises two questions. First, why is the right foreleg in rock paintings of cattle sometimes shown extended in a manner unlikely to be a stylistic exaggeration of bovine movement? Second, why do African farmer beliefs appear to have been depicted in a distinctly hunter-gatherer rock art tradition? This contribution seeks to answer these questions by considering who the audience was for such performances of image-making. It challenges the conclusions of Western art-historical approaches by revisiting the rich painted details in cattle-raiding scenes and drawing on the ethnographies of southern African hunter-gatherers and agropastoralists.

Witschey, Walter (Tulane Univ., MARI Longwood Univ. Institute of Archaeology)**[292]***Discussant***Witt, David****[66]***Moderator***Witt, David (SUNY Buffalo), Karen Brunso (Chickasaw Nation), Julia Prince-Buitenhuys (Caltrans) and Jay Michaels (University of South Florida)****[293]***The Portrait of Professional Qualification Standards: Where Archaeologists Stand Regarding the Secretary of the Interior Standards*

In August 2023, the SAA Government Affairs Committee sponsored the organization of a survey of archaeologists on the Secretary of the Interior Standards and Guidelines for Archaeology and Historic Preservation (SOIS). This was done in response to a post by the US Department of the Interior announcing their intent to review and update the SOIS. After analyzing the over 1,000 responses received to the survey using a rating system for prototype analysis to identify common themes, this presentation will highlight the key findings from the survey related to professional qualifications, both the opinions of the archaeologists on how the standards should change and the current landscape of which archaeologists are experiencing in the labor market, hiring practices, and education.

Witt, David [293] see Brunso, Karen

Witt, David [172] see Primeau, Kris

Witt, David [293] see Prince-Buitenhuys, Julia

Witt, Rachel (Tulane University), Gabriel Prieto (University of Florida), John Verano (Tulane University) and Luis Flores (Programa Arqueologico Huanchaco)

[212]

Life before Death: A Bioarchaeological Study of the Biosocial Histories of Human Sacrifices at Pampa la Cruz (Montículo 2), Moche Valley, Peru

Human sacrifice is a form of ritual theater staged by emerging empires to articulate new power asymmetries and legitimize imperial enterprises. The culmination of the event is the death of the victim because ritual homicide transforms the body into an efficacious offering while generating vivid images of coercion and the immutable authority of the state. Although lethal wounds provide physical evidence of this pivotal moment, a lifetime of biosocial experiences on sacrificed bodies may be examined to infer the experiences of individuals in the context of social change. Over a decade of collaborative research conducted by the Huanchaco Archaeological Program indicates that the Chimú Empire (AD 1000/1100–1450/1470) sanctioned periodic ritual events of human sacrifice at multiple locations near the capital city Chan Chan in the Moche Valley. This research presents the results of a bioarchaeological analysis of human skeletal remains from a newly excavated sector of Pampa la Cruz (Montículo 2). This work supports previous studies suggesting that human sacrifice served the various facets of Chimú statecraft. Using a social bioarchaeological perspective this research also contributes to ongoing efforts to contextualize the biosocial histories of human sacrifices against the mosaic of imperial developments in ancient societies.

Witt, Rachel [212] see Sutter, Richard

Woehlke, Stefan (University of Maryland, College Park), Evan Dame (Town of North Brentwood), Amir King (Direct Dimensions), Olivia Meoni (University of Maryland) and Justin Mohammadi

[14]

Producing a Digital Interpretive Environment: The Role of Digital Documentation and Game Engines in Reaching New Audiences with Critical Stories of the Past

Two goals of the North Brentwood Digital Heritage and Archaeology Project are educational outreach and restorative justice. Digital documentation and gaming are an increasingly important part of those efforts. Multiple classes of students have taken an active role in engaging with the community to provide digital heritage services, including the development of a tour app, GIS, 3D documentation of at-risk sites, and the development of a digital interpretive environment using Unreal Engine. These grant-supported efforts have relied on the commitment of community members, students, and graduates in and out of the classroom. The digital Windom Road Barrier environment preserves a 70-year-old guardrail that separates the historically Black community of North Brentwood from the historically White community of Brentwood. The imminent success of a years-long effort to remove and memorialize the barrier's history brings mixed emotions to some of the community members whose lives were shaped by this seemingly mundane artifact of daily life. One hundred years of gains made the removal of the barrier possible, but its erasure from the cultural landscape brings challenges to sharing this dark history with the youth. This project is the beginning of a new approach to cross-generational storytelling to preserve North Brentwood community heritage.

Wohlgemuth, Eric (Far Western Anthropological Research Group)

[256]

Toward a Synthesis of California Archaeobotany

I take a pan-regional frame of reference to address the impressive variability in more than 7,500 analyzed plant macroremains samples from the desert, coastal, and interior lowland and upland reaches of California. I focus on the effects of variation in habitat, including animal resources, especially fish and shellfish, as well as plants. I also consider topography and climate, as well as settlement and land use histories, that influence the markedly different longitudinal macrofloral sequences from more than 25 regions of California.

Wolf, John [27] see Contreras, Daniel

Wolf, Marc (City University of New York; Indiana University; University of Western Florida) and Elisandro Garza (IAAH; City University of New York) [291]

Rain Born of the Mountains: Hydrology, Vistas, and Political Control

Mesoamerican archaeological sites often take advantage of the surrounding natural landscape to enhance both the political machinations of the ruling elite and the sacred ideals of the community at large. In Guatemala, Belize, Mexico, and other highland or steep regions, archaeologists have repeatedly demonstrated the dynamic relationship between the natural environment, specifically mountainous or sloped topography, and associated rain/run-off, and architecture. The predominantly Classic period (250–900 CE) site of Copan in western Honduras is likewise exemplary, embracing this hilltop and rain-dependent ethos at several satellite settlements within the Copan Valley. An additional theme explored is the intertwined aspects of utility and viewshed in the placement of these architectural groups. The higher elevations of many settlements are conveniently close to available rainwater and are highlighted by panoramic views of the land below. These are also physical features of political control in the form of distribution, access, and visual monitoring, while simultaneously bolstering the spiritual and symbolic power of the buildings, their inhabitants, and local authority.

Wolf, Marc [291] see Garza, Elisandro

Wolf, Marc [110] see Kalinkos, Lia

Wolf, Sibylle [282] see McCartin, Madison

Wolf, Sibylle [58] see Singh, Natasha

Wolff, Christopher (University at Albany) [96]

The Architecture of Fear: Archaeological Evidence of Fear's Influence on Built Environments

The influence of fear on our interactions with each other and the world around us is ubiquitous. Despite this, it can be challenging to recognize its effects in the archaeological and historical record. However, built environments create enduring physical evidence and their elements reflect the cultural fears of their makers. This evidence is multiscalar, occurring in various forms from domestic vernacular architecture to large municipal constructions. The intensity of the fear integrated into architecture can also vary, ranging from simple protection from the elements to existential fears at a societal scale. This paper will focus on examples of cultural-scale fears that past societies were addressing in their architecture and connect it to more recent and contemporary cases. It will discuss some of the ways archaeologists can identify and study the role of cultural fears through analyses of built environments in the archaeological record and provide case examples of how fear can influence and be reflected in the architecture of diverse cultures in the past and present.

Wolff, Christopher [99] see Wilcox, Daniel

Wolfhagen, Jesse and Max Price (Durham University) [85]

Picking Up the Pieces: The Continued Influence and Impact of Redding's "Breaking the Mold" on Animal Domestication

Richard Redding's work on "breaking the mold" on how we explain the development of food production is emblematic of the major contributions he made to zooarchaeological thinking: his creativity, curiosity, and willingness to question dearly held beliefs. In this paper, we overview some of Redding's many insights about expanding our field's approach to variation in human-animal interactions, particularly his skepticism of

unilineal trends, his exhortation to imagine more variable ways for people and animals to interact in the past, and his insistence to meld multiple lines of evidence together without giving any one data source undue primacy. We then discuss how his work influenced our own research into the dynamics of changing human-animal interactions during the early Holocene with cattle in central Anatolia and pigs across northern Mesopotamia. We particularly highlight how Redding's insights continue to help resolve puzzling patterns and drive inquiry forward.

Wolverton, Steve (University of North Texas), Jonathan Dombrosky (Crow Canyon Archaeological Center), Lisa Nagaoka (University of North Texas) and Susan Ryan (Crow Canyon Archaeological Center)

[249]

Taphonomic Analysis with Multisite Big Data in the Central Mesa Verde Region

Understanding taphonomic patterns across large spatial scales can greatly enhance archaeological interpretation. However, standardized data curation across many sites is a significant challenge. Thus, opportunities for taphonomic analyses that employ big multisite datasets are rare. Data curation practices in archaeology are often different from those in other data rich sciences—such as software engineering and bioinformatics—where documentation with open-source software and the programmatic integration of basic tasks are commonplace. In addition, archaeology may have restrictions in data sharing related to culturally sensitive information. With improved curation, data analytics approaches enable archaeologists to tackle large challenges, such as multisite taphonomic analyses in rapid, efficient, and powerful ways. Crow Canyon Archaeological Center has systematically curated data from projects in a universal database for decades. In the 1990s, this information was incorporated into a relational database, which is currently managed using PostgreSQL and networked for real time analyses with R. Faunal analysis protocols were also explicitly designed with data quality standards during database construction. Faunal and taphonomic data from approximately 130,000 specimens across 50 archaeological sites are curated. We showcase how these data aid the interpretation of region-wide taphonomic patterns bolstered by data science practices.

Wolverton, Steve [200] see Nagaoka, Lisa

Womack, Andrew (Furman University)

[255]

Pottery Production and Use at the Shang Dynasty Village of Guandimiao

The Shang Dynasty is widely regarded as China's first historical dynasty and has been a focal point for archaeological research for nearly 100 years. While extensive excavations at the late Shang capital at Anyang, as well as other large Shang sites, have provided a window into many aspects of urban society, relatively little is known about groups living under Shang control outside of major political centers. Excavations at the late Shang site of Guandimiao revealed a nearly complete village with the most striking attribute being the high number of pottery kilns, which outnumber houses. However, the economic role of this community within the wider Shang economy, as well as the organization of ceramic production at the site, remains unknown. Here I present the results of the first large-scale study of use-alteration and forming marks on nearly 200 whole vessels from the site, which provides insight into vessel construction, learning, production organization, use, and overall economic organization at Guandimiao.

Womack, Andrew [173] see Thomas, Dayna

Wong, Eponine

[21]

Is This Democracy? Consensus Decision-Making and Collective Self-Governance in Mesoamerica

The term "democracy," with its roots in the Greek word *demokratia*, originally referred to the capacity of "the people" to make collective decisions regarding wider society and to effect change in the public sphere.

As republicanism emerged in Europe and North America in the eighteenth and nineteenth centuries, “democracy” was co-opted and came to be conflated with a form of the state in which citizens vote for representatives to exercise political power on their behalf. This narrow understanding of “democracy” has led to the perception that democracy is historically rare, a uniquely “Western” invention that traces its roots to classical antiquity. This paper considers historical and contemporary examples from Mesoamerica, societies structured around relatively decentralized, egalitarian processes of decision-making, which rely on consensus-building and collective deliberation. How does the concept of “democracy,” as commonly conceived, limit our understandings of these societies and communities, and how do these examples, in turn, have the power to transform our own understanding of the term? Furthermore, how does the reconceptualization of “democracy” posed by these examples from Mesoamerica challenge narratives of “Western modernity,” and how do they affect political discourses today?

Wong, Gillian (University of Texas at El Paso; University of Tübingen)

[234]

Discussant

Wong, Steven [103] see Sakai, Sachiko

Wood, Peter (Duke University) and Virginia Richards

[154]

How Dugouts (and Digging) Transformed the South Carolina Lowcountry, 1670–1720

Long before colonization, coastal inhabitants in Carolina’s Lowcountry used dugout canoes for trading, fishing, and gathering oysters. When the English intruded into this watery environment in 1670, many settlers migrated from Barbados, bringing captive Africans and hopes for establishing a profitable system of slave-based, staple-crop agriculture. After experimentation, rice became their export of choice, but success depended on moving this bulky product from dispersed plantations to a central shipping point. Swamps made overland travel difficult, so separate tidal rivers provided the best pathways for transporting people and goods. Indigenous neighbors, despite dwindling numbers, provided useful boats and paddlers, but ferrying backcountry furs and casks of rice through the open ocean to reach the port of Charlestown proved dangerous and inefficient. Solving this dilemma would make some in Carolina’s White minority extremely rich. The game-changing but little-known solution came in three parts. Native Americans shared knowledge of useful small streams and “haulovers” that joined adjacent rivers, offering shorter and safer routes to Charlestown harbor. Enslaved Africans provided the forced manpower to dig connecting canals and widen them to accommodate rowing oars. And European craftsmen modified dugouts, using several logs to create wider boats (called pettiaugers) that could transport heavier loads.

Woodfill, Brent (Winthrop University)

[230]

Chair

Woodfill, Brent (Winthrop University), Lauren Norton (Winthrop University), Abigail Rowell (Winthrop University), Scott Werts (Winthrop University) and Socorro Jiménez Álvarez (Universidad Autónoma de Yucatán)

[230]

Visualizing Salt Production below, above, and on the Ground in Ixtapa, Chiapas, Mexico: Insights from Ethnography, Aerial Photogrammetry, and Geochemistry

The Ixtapa saltworks in highland Chiapas have the distinction of being one of the last Precolumbian saltworks in the interior Maya world that is still in use, and members of Proyecto Arqueológico Sak B’alam y Salinas del Interior de Chiapas and Winthrop University’s Environmental Studies Program have been conducting

investigations there for the past five years. While earlier work focused on geochemical analysis and ethnography to understand the techniques used in salt production and the elemental and nutritional properties of the salt itself, during the 2023 field season, project members began a formal investigation of the neighboring archaeological site, La Tortuga. The results of preliminary excavations, materials analysis, and UAV photogrammetry will be discussed in relation to the insights gleaned from longer-term analyses in the present paper, with a particular focus on reconstructing the history of salt production, changing patterns of social organization, and interregional ties.

Woodfill, Brent [230] see Kelly, Mary Kate
Woodfill, Brent [230] see Shiratori, Yuko

Woodhead, Genevieve (University of New Mexico)
[284]

A Foreign Ingredient in a Local Tradition: Chaco Canyon Pottery and the Chaco–Chuska Connection

In the mid-twentieth century, Anna Shepard discovered that much of the pottery found in Chaco Canyon, New Mexico, was apparently produced in the Chuska mountain and slope area some 70 km to the west. Since then, Southwest archaeologists have studied the dynamics of Chaco–Chuska interaction and the intensity and complexity of Southwest exchange patterns. As part of a larger study of late (ca. and post-AD 1100) Chaco Canyon ceramic assemblages from sites including Pueblo Bonito, I examined a sample of Chaco Black-on-white (ca. AD 1075–1150) and Chaco-McElmo Black-on-white (ca. AD 1100–1200) sherds. These two ceramic types, while never the most abundant in an assemblage, were likely locally made in Chaco Canyon and are emblematic of Chaco's late occupation. Under magnification, a small number of sherds with the typical macroscopic properties of Chaco and Chaco-McElmo Black-on-white contained abundant Chuska trachyte, a dark igneous rock nonlocal to Chaco Canyon but characteristic of Chuska pottery. This mix of local ceramic tradition and foreign ceramic ingredient frustrates archaeological typologies but serves as a reminder of the movements of past potters, the raw materials they used, and the pots they made.

Woods, Julie (University of Massachusetts, Amherst), Jesse Bergevin (Oneida Indian Nation)
and Marla Taylor (Robert S. Peabody Institute of Archaeology)
[72]

Building Community in the Northeast

The Northeast NAGPRA Community of Practice was founded in 2023 in an effort to build community and strategize on issues and opportunities related to NAGPRA implementation that are unique to the region. Our goal is to improve trust, develop communications and increase cooperation. Discussion topics include split collections, collectors and collecting practices across the northeast, working with non-federally recognized tribes, and identification of ancestral lands without relying on colonial or US treaties. Thematic concepts address building trust between tribal communities, institutions, and agencies; legacies of acquisition; density of regional institutions; and academic and archaeological overreach. Group membership consists of tribal communities from the northeast, public and private institutions, state agencies located in the region, and nonlocal institutions with collections from the northeast.

Woodson, M. Kyle [88] see Morgan, Linda

Wooller, Matthew [120] see Pease, Allyson

Woollett, James (Université Laval, Centre d'études nordiques) and Edward Flowers (Independent Researcher)

[307]

Two Balades in the Same Landscape: Perspectives of Oral History and Archaeological Survey on the Cultural Landscapes of the Dog Island Region, Nunatsiavut

As part of an ongoing fieldwork program in the Nain region of Nunatsiavut (Newfoundland and Labrador), the authors worked together in 2022 on a survey of Inuit archaeological sites on Dog Island and Sculpin Island. Already-known archaeological sites were revisited and a number of new sites were documented (sod houses, tent rings, hunting blinds, caches, and lithic scatters). Three remarkable locations documented in the course of this survey will be discussed in this presentation. All three are, in many regards, typical of sites of their type and age; nevertheless, all three were challenges to find and to interpret given their particular compositions and settings in the landscape. A lively discussion regarding these sites' forms and functions developed between the authors; one with a formal archaeology training and the other with extensive personal archaeological experience with archaeology and living on the land in the region, applying his own knowledge and his family's oral histories. This presentation will describe these sites and contrast how the two authors viewed and interpreted them. The paths of these two archaeologies show important points of divergence and convergence that are informative for landscape archaeology and for the practice of community archaeology.

Wooten, Kimberly (California Department of Transportation, Cultural Studies Office)

[71]

Recording Baselines: Getting Climate Change and Plastic Pollution Data into the Archaeological Record

Archaeological site records are a tool for recording not only a site's cultural constituents—landscapes, features, artifacts, built environment components, etc.—but also a format for documenting any adverse impacts that have occurred to those resources. What if those site record forms were structured not only to record the standard project development impacts but allowed an option for capturing baseline information specifically on climate change impacts to cultural resources? In California, and across the United States, impacts from sea-level rise, wildfire, erosion, extreme rain events, and even plastic pollution are all becoming increasingly recognized as adverse effects to cultural heritage. Information captured on site records would help focus professional attention on issues surrounding climate impacts on cultural heritage and form an important baseline from which future archaeologists, heritage preservation specialists, climate scientists, environmentalists, and other researchers could build. This poster is intended to be interactive, and input will be sought from working professionals on ways to capture data on climate change impacts to cultural resources within the context of site recordation.

Wooton, Kathleen [36] see Iorga, Anastasia

Workman, Michael [6] see DeMuth, R. Carl

Worman, F. Scott (Missouri State University) and Elizabeth Sobel (Missouri State University)

[231]

Not Just Jed and Jethro: Erasing Diversity from Public Memory in the Ozarks

The dominant historical narrative of the Ozarks characterizes the region as rural, White, and agrarian, with racial diversity and industrialization limited to modern urban contexts and nearby cities like St. Louis. Building on the work of descendant-activists and avocational historians, our research in northwest Greene County, Missouri shows that while this part of the Ozarks is now predominantly rural and White, it was more industrial, urban, and racially diverse in the late nineteenth and early twentieth centuries. Using archaeological, documentary, and oral history data, we investigate the growth of Black and White communities supported by local limestone industries, daily life in Black and White households in these

communities, and the eventual relocation of most Black households from northwest Greene County by the mid-twentieth century. An application of critical theory to the results illuminates the processes that created today's rural, White communities and the concomitant erasure of economic and racial complexities from public memory, in both Greene County and the Ozarks generally. The findings demonstrate the value of archaeology in producing more accurate, multivocal narratives relevant to past and ongoing inequities.

Worthey, Kayla (University of Arizona), Jessica Tierney (University of Arizona), Steven Kuhn (University of Arizona) and Abdeljalil Bouzouggar (Institut National des Sciences de l'Archéologie et du Patrimoine)

[55]

Application of Plant Wax n-alkane and GDGT-based Paleoenvironmental Proxies Derived from Archaeological Cave Sediments: A Case Study from the Middle Stone Age site of Bizmoune, Morocco

Lipid biomarkers derived from plant waxes (n-alkanes) and the cell membranes of bacteria and archaea (GDGTs) are potentially powerful paleoenvironmental proxies in the field of archaeology given their durability and ubiquity in terrestrial sediments. We use the distributions of glycerol dialkyl glycerol tetraether (GDGT) and plant wax n-alkane structural forms in conjunction with compound-specific stable isotope analysis of plant wax n-alkanes ($\delta^{13}\text{C}$, δD) to investigate vegetation history, environmental moisture, and temperature through time during Marine Isotope Stage (MIS) 5/6 at the Middle Stone Age cave site of Bizmoune, located in southwestern Morocco. The use of lipid biomarkers for paleoenvironmental reconstruction is relatively new in its application to near-entrance cave sediments, particularly for GDGT-based paleotemperature proxies. Here we discuss the successes and challenges faced when applying these methods to cave mouth contexts.

Wright, Aaron (Archaeology Southwest) and John Welch (Archaeology Southwest)

[88]

Triangulating Piipaash History along the Lower Gila River, Southwestern Arizona

Contemporary Piipaash of the Gila River and Salt River Pima-Maricopa Indian Communities, in the greater Phoenix area of south-central Arizona, have histories tying them to the lower Gila and lower Colorado Rivers. These "down river" landscapes were their exclusive territories until they moved upriver for safety and solace among their Akimel O'odham allies in the middle Gila River valley. Piipaash ancestors completed this profound demographic transformation less than a generation before the region's annexation by an expanding US Empire in 1848/1852. While an outline can be pieced together through ethnohistoric and oral historical records, archaeologists have all but ignored this social process and its material signatures. This paper synthesizes recent collaborative research that is weaving together a Piipaash cultural landscape along the lower Gila River. Known for its immense galleries of rock imagery and fields of ground figures, the lower Gila also hosts ancestral Piipaash settlements that offer authorship for the images. Attention to the substance and structure to these settlements provides a better understanding of the history and demography of the Piipaash and other riverine Yuman Tribes, and Patayan archaeology more broadly.

Wright, Aaron [156] see Palonka, Radoslaw

Wright, Carrie [36] see Iorga, Anastasia

Wright, Henry [169] see Luurtsema, Anna

Wright, Henry [41] see Michalski, Matthew

Wright, Joshua [256] see Carolus, Christina

Wright, Kevin (University of Oklahoma)**[312]**

Spaces of Survivance: Recovering Nineteenth-Century Choctaw Homesteads Misrecorded in Archaeological Literature
 Historic Indigenous sites are often mislabeled in archaeological literature. As some scholars have explained, a common reason for this stems from the conventional practice of labeling cultural affiliation based on traditional artifact classifications. More recently, others have discussed how past preservation ethics within the cultural resource management industry have prevented sites associated with historically marginalized communities from being recorded. In this paper, we review a century's worth of federally funded surveys conducted within the geographic boundaries of the Choctaw Nation in Oklahoma. While our results convey a historic exclusion of Indigenous sites from the archaeological literature, we offer a few viable practices to prevent this practice from continuing.

Wright, Nathan [256] see Harding, Makayla

Wriston, Teresa (Desert Research Institute), JD Lancaster (Desert Research Institute), Jillian Maloney (San Diego State University), James Futtly Jr. (San Diego State University) and Loren Davis (Oregon State University)**[262]**

Willamette Valley Project Overview: Using Subbottom Profiling, Coring, Augering, Geomorphic Mapping, and Regional Archaeological Data to Inform Sensitivity Modeling and Archaeological Research Design in the Willamette Basin, Oregon

The US Army Corps of Engineers (USACE) manages the Willamette Valley Project, a system of 13 dams and associated reservoirs in the Willamette River Basin, Oregon. Environmental settings of these 13 project areas vary by elevation, substrate, vegetation, and other characteristics, but all are located along major rivers draining into the Willamette River. During this multiyear project, an interdisciplinary team used geomorphic mapping and subbottom profiling of reservoir beds to select targets for coring and augering during annual reservoir drawdowns. During low water, field checks of subbottom profiling data, particularly in areas with associated water column noise (WCN), provided the opportunity for the team to physically verify interpretations—a step not easily attained offshore where this method is often applied. The radiocarbon ages of materials from cores and augered samples span the Late Pleistocene through Holocene and helped identify which landforms are more likely to contain buried cultural materials and how deeply they might be buried. This geomorphic information was used in concert with cultural data from throughout the Willamette River Basin to inform our archaeological sensitivity model, research design, and management recommendations.

Wrobel, Gabriel (Michigan State University) and Shawn Morton (Northwestern Polytechnic)**[21]**

Only Murders in the Cavespace? Considering Archaeological Assumptions about Human Interments

As if by default, deposits of human remains in caves and cenotes in the southern Maya Lowlands dating to the Late and Terminal Classic periods have been interpreted by many archaeologists as sacrificial victims. The position seems predicated on an assumption of both the accuracy and universality—across time, space, and variations in cultural fabric—of colonial period descriptions of ceremonies associated with rain propitiation centering on cenotes in the Yucatán Peninsula of the northern Lowlands. Focusing primarily on caves in Belize, we briefly review the basis for archaeological claims of ceremonial homicide and some well-attested examples thereof. Using this as our baseline, we then explore a case example from a large, commingled deposit of skeletal remains in Actun Kabul. We propose that rather than the product of sacrifice, the age distributions of individuals included there and in other caves of the region, along with features of the broader context of interment (including culture-historical), best reflect the complex funerary ritual of high-status and elite Maya families of the Classic period.

Wrobel, Gabriel [295] see Mink, Kirsten

Wurtz Penton, Michelle (Versar Inc.), Myles Miller (Versar Inc.), Mark Willis, Michael Stowe (White Sands Missile Range) and Chet Walker
[326]

Searching for Pueblos among the Dunefields: Remote Sensing Investigations at Four Pueblo Settlements on the Fort Bliss Military Reservation

In the fall of 2017, the Fort Bliss Cultural Resources Team funded a unique project to assess the potential for using remote sensing technologies to analyze the subsurface characteristics of buried cultural sites to support National Register of Historic Places nominations. Geophysical remote sensing and aerial multispectral imaging methods were utilized over a two-year period at four sites to locate and define buried pueblo rooms and room blocks that were not visible on the site surface. Other features, such as water reservoirs, canals, and pithouses, were also identified. The effectiveness of various geophysical methods for identifying buried features was compared. Ground-truthing excavations confirmed the presence of prehistoric architectural features in seven of the nine test units placed over anomalies. In addition to the study of prehistoric settlements, the historic agricultural landscape of the Plowed Field site was revealed through archival research combined with geophysical methods.

Wyllie, Cherra

[216]

Ballplayers, Captives, Kings, and Queens: Examining the Identity of Key Players in Veracruz Ballgame Rituals

In south-central Veracruz, representations of ballplayers, captives, kings, and queens defy clear categorizations, made more complex by costume and gender designations, hierarchical proportion, natural sexual dimorphism, and symbolic roles versus historic portraiture; distinctions that may be intentionally blurred. On stone stelae, mural paintings, and narrative ceramics, rulers wear ballgame regalia, captive ballplayers can sometimes be seen towering above their captors, and elite women take part in the “dressing,” binding, and ritual beheading of defeated ballplayers or subjugated rulers. In this presentation, I examine Epi-Olmec and Classic period art in conjunction with archaeological context, to move beyond the “why” and “what” of Veracruz ballgame rituals, in a quest to identify the “who” of key individuals and supporting cast.

Wyllie, Cherra

[322]

Discussant

Wyllie, Cherra [129] see Gillespie, Jeanne

Wynne-Jones, Stephanie (University of York)

[245]

The Importance of Archipelagoes

The role of islands in the western Indian Ocean has been well explored by archaeologists and historians, who point to a combination of natural and social advantages created by these bounded worlds. What has been less commented on is the role of archipelagoes as crucial units of exploration. In this paper, I review the archaeology and history of archipelagoes along the eastern African coast, suggesting that they were central to social development and connectivity in the region between the seventh and fifteenth centuries CE. The Kilwa archipelago of southern Tanzania is then the focus of a discussion of archipelagoes as urban clusters, drawing on recent research from the region. The paper suggests that archipelagoes not only offer important settings for social growth, but that the natural advantages of the setting also contained the seeds of disaster for the inhabitants during the period of European colonialism from the sixteenth century onward.

Wysocka, Joanna (Polish Academy of Sciences, Poland), Beata Drupka, Paige Lynch (University of New Mexico) and Marcin Krzepakowski (Museum of Wagrowiec, Poland)

[80]

Health Status of the Inhabitants of the Medieval Village and Town in Greater Poland

Studying living conditions of any population in the past using indirect indicators such as skeletal lesions is challenging, as their occurrence can be connected and influenced by different factors such as individuals' immune systems. However, porous skeletal lesions (porotic hyperostosis, cribra orbitalia), and linear enamel hypoplasias (LEH), have extensively been used as nonspecific indicators of health conditions in past populations. Such indicators of stress are often associated with nutritional deficiencies, anemias, parasite infections, or chronic disorders. The aim of the study is to describe the health status of the inhabitants of medieval villages and towns from similar periods and environments (medieval settlements from Greater Poland). This study examines human remains from the town Dzwonowo (fourteenth–eighteenth centuries), and the village Gać (fourteenth–sixteenth centuries), both vanished settlements discovered within the Zielonka Forest in Poland. Individuals included in the study were examined macroscopically for the occurrence of the aforementioned porous skeletal lesions and LEH. Additionally, the severity of cribra orbitalia in particular was evaluated. Paleopathological data were then compared between sexes, age-at-death categories, and between the two sites. Our results contribute to the narrative of population-level and individual-level health and nutrition during the Late Medieval and post-Medieval periods in Greater Poland.

Xie, Liye (University of Toronto)**[19]***Rammed-Earth Construction as a Catalyst for Social Transformation*

This paper explores a series of inquiries regarding the role of rammed-earth construction during the late Neolithic and early Bronze Age in China, specifically focusing on how the organization of human resources propelled social transformation. The study encompasses the following dimensions: First, community dynamics. How did the collaborative nature of rammed-earth construction projects potentially foster community relations? Second, hierarchical structures. What could be the implications of the social dynamics within construction for the broader societal hierarchy? Third, cultural influence. To what degree did the rituals and shared experiences associated with construction likely contribute to cultural unity and influence the acceptance or rejection of new social norms? Fourth, sustainability of change. How might the necessity for repeated reconstruction and repair have sustained community involvement and shaped lasting social impact? Through an exploration of these questions, this paper aims to provide insights into the intricate relationship between rammed-earth construction, labor organization, and its potential as a catalyst for social transformation with historical and cultural contexts.

Yacubic, Matthew (United States Air Force)**[270]***Chair*

Yadmaa, Tserendagva [130] see Farquhar, Jennifer

Yaeger, Jason (University of Texas, San Antonio), Bernadette Cap (San Antonio College), M. Kathryn Brown (University of Texas, San Antonio) and Rachel Horowitz (Washington State University)**[251]***The Contributions of Belize Archaeology to Our Understanding of Ancient Maya Economies*

Archaeologists working in Belize have made signal contributions to our knowledge of Maya economies and their relationships to political processes and dynamics. In this paper, we examine the ways that archaeological research at Maya sites in Belize has advanced our understanding of these topics; (1) centralized marketplaces as key nodes for exchange and distribution of goods and their roles in Classic Maya society; (2) the organization of specialized production of key goods (including salt, chert tools, obsidian tools, shell beads, and granite manos and metates) and the ways those goods were exchanged more widely; (3) agricultural

intensification; and (4) the heterogeneity of ancient Maya economies on a regional scale. We also discuss the contributions of Belizean archaeology to broader debates about the relationships between economy, society, and polity, including (1) the household as a key locus of economic production and consumption; (2) the role of small communities in self-organizing processes of regional economic integration; and (3) the relationship between consumption and social constructs of identity, desire, and status. In all of these areas, archaeologists working in Belize have led the way. We close by discussing how current research in Belize continues to set the agenda for understanding Maya economies.

Yaeger, Jason [32] see Nowakowski, Lauren

Yakal, Madeleine (University of California, Los Angeles) and Iman Nagy (University of California, Los Angeles)

[231]

Navigating the Field: New Perspectives from Women of Color in Archaeology

Archaeology as a discipline emerged as an extension of colonialism, and although recent efforts over the last several decades have worked to “decolonize” the field, nonlocal perspectives continue to be prioritized by Western institutions. This paper seeks to address perpetual inequality within the field of archaeology by highlighting normalized practices by researchers within the “culture of archaeology.” It is our contention that, as a symptom of the persistent coloniality present within archaeology, many archaeologists are trained to view the world as a sort of cultural buffet, in which they are invited to actively participate in the construction of a history they do not belong to. This positionality reinforces nonlocal worldviews onto non-Western contexts. The goal of this paper is to discover viable solutions for creating equity within the field; to discuss, highlight, and validate successful cases despite challenges that minority researchers face. In this way, we seek to humanize our field by reclaiming the joy and responsibility we have as cultural heritage specialists. We discuss our projects and community work across Southeast Asia and Northeast Africa that relate to community engagement, working with marginalized communities, utilizing indigenous perspectives, and combating the colonial nature of archaeological work.

Yalcin, Tugce (University of Georgia), Maxwell Davis (University of Georgia) and Suzanne Pilaar Birch (University of Georgia)

[334]

Integrating Isotopic Data across Ancient Anatolia for Paleoenvironmental Reconstruction

The increased availability of stable isotope data has made it possible to carry out comparative studies across space and time. In this paper, we review published and unpublished stable oxygen, carbon, and nitrogen isotope data derived from zooarchaeological, archaeobotanical, and bioarchaeological remains across Anatolia from the Neolithic through to the modern period. We evaluate trends in spatial distribution of values as well as temporal variation. The Faunal Isotopes Database in Neotoma provides a repository for multiproxy data types, and allows for an integrated approach to reconstructing paleoenvironment. In particular, we emphasize the importance of regional comparisons for interpretation of archaeological data. This analysis provides an additional baseline for considering the environmental context of important cultural and social transitions through time.

Yamamoto, Atsushi (Yamagata University), Oscar Arias Espinoza (Universidad Nacional Mayor de San Marcos) and Juan Pablo Valgaz Díaz (Gobierno Autónomo Descentralizado Municipal)

[161]

Locality on the Frontier

In recent years, several archaeological investigations have been conducted in northern Peru and southern Ecuador, which are considered “northern frontiers” in the Andean archaeology. While it has been pointed out that these areas are important for understanding interregional interactions in the ancient Andes, solid empirical data have not been presented to evaluate this issue. In addition, our previous studies in these areas

have focused only on interregional interactions and overlooked the locality of each region. Therefore, in this presentation, we discuss the locality of each region based on frontier perspectives using our new data from the Jaén region in northern Peru, especially the sites of Inyatambo and Turuco, the Cañar region in southern Ecuador, and the sites of Cerro Narrío and Loma de Pinzhul.

Yamamoto, Atsushi [299] see Arias Espinoza, Oscar

Yang, Dongya [135] see Conlan, Christine

Yang, Laura [266] see Kress, Yakira

Yanito, Keely (New Mexico State University [NMSU])
[112]
Chair

Yanito, Keely (New Mexico State University [NMSU])
[112]

Body Modifications within the Southwest through Rock Art and Ceramics.

In the Jornada Mogollon cultural area, anthropomorphic representation in rock art and ceramics provides evidence for prehistoric body modification, specifically tattooing. This presentation will focus on the history of the Jumanos, Tompiro, and Mansos. When the Spanish arrived in El Paso in the fourteenth century, they encountered the Manso, Jumanos, and Tompiro peoples with tattooed faces. Hypothetically, these people all descended from the Jornada Mogollon. To begin exploring this hypothesis, I examine evidence of facial or body modification during the El Paso phase. I consider rock art imagery from Cottonwood, Hueco Tanks, and Three Rivers. Additionally, I'll document imagery on ceramic vessels including Villa Ahumada Polychrome, Ramos Polychrome, and Chupadero Black on White.

Yann, Jessica (Michigan State University)
[39]
Discussant
[73]
Chair

Yao, Alice [315] see Guo, Siyun

Yazedjian, Laura [236] see Tarrant, Damon

Yebra, Lucía, Valeria Cortegoso (ICB-CONICET-UNCuyo), Erik Marsh (ICB-CONICET-UNCuyo), María Eugenia de Porras (IANIGLIA-CONICET) and Antonio Maldonado (Universidad de La Serena)
[67]

Human Strategy and Paleoclimate in the Andean: Variation in Intensity Occupation in the Laguna del Diamante (ca. 2000–500 years BP)

Laguna del Diamante (34°S) is a high-altitude wetland (3,000 m asl) with resources that have been attractive to human societies for the last 2,000 years. This article evaluates the variable intensity of its occupation in five temporal segments between 2030 and 440 cal BP, according to a chronology modeled from 14 radiocarbon

dates excavated in stone enclosures at three sites. The variation in the density of proximal flakes is used as a proxy of human occupation intensity. We assess the correlation of more intense human occupation and environmental changes in temperature and humidity, as recorded at three high-altitude lakes: Aculeo, Chepical, and Maule (33°–35°S). These archives include proxies for vegetation cover, ice cover extent, and changes in precipitation derived from the Westerlies and the El Niño Southern Oscillation. There is a correlation between favorable conditions and more intense occupations at multiple times in the sequence. We discuss two periods of greater intensity: 1200–1280 cal BP (calibrated medians), when summer temperature and precipitation was higher, and 450–500 cal BP, when temperatures were lower and the Inca were in the area.

Yebra, Lucía [266] see Castro, Silvina

Yebra, Lucía, [306] see Marsh, Erik

Yellow Bird, Pemina [8] see Domeischel, Jenna

Yeomans, Lisa [12] see Codlin, Maria

Yopez Alvarez, Willy [175] see Bautista, Stefanie

Yerka, Stephen (Eastern Band of Cherokee Indians, THPO), D. Shane Miller (Mississippi State University), Matthew Boulanger (Southern Methodist University) and Joshua Wells (Indiana University, South Bend)

[253]

The Paleoindian Database of the Americas: On Such a Full Sea Are We Now Afloat

The Paleoindian Database of the Americas (PIDBA) freely shares primary and detailed attribute data on tens of thousands of ancient lithic tools spanning the Paleoindian and Early Archaic time periods. In its first iteration in 1990, David G. Anderson compiled descriptive datasets into a tool for investigating the distributions of certain technologies and how they can apply to questions at scale. PIDBA has become now a 30-something-year-old cottage industry of sorts with numerous researchers volunteering time and effort to sustain PIDBA and advance research. PIDBA from its inception has been inclusive and open for any interested researchers to join in, or for researchers to access separately and make use of the provided lithic survey data, maps, attribute data, and spatial information. This presentation will outline the future state of PIDBA and how it will connect with other digital infrastructures. Additionally, this is a lesson on community building fostered by PIDBA and other Anderson projects like DINAA: projects where young and less young scholars work together hand-in-hand, where ideas and innovation are welcomed and encouraged, thus rising a tide of collaboration, and we must take the current when it serves.

Yerka, Stephen [253] see Kansa, Eric

Yoneda, Minoru [51] see Lin, Kuei-chen

Yoon, David (American Numismatic Society)

[170]

Distance and Power in Early Medieval Coinage in Spain

Compared to most other archaeological artifacts, coins contain a large amount of information relating directly to political administration. Spatial patterns in this information should provide a way to see how processes of political power operated in practice. Using information on early medieval coin finds in the

Iberian Peninsula, it can be seen that widely varied spatial patterns can be found under different political and economic circumstances, even when the technology of travel, transport, and administration remained largely the same. During a period when ordinary monetary circulation might have a range of a few hundred kilometers, extraordinary political circumstances could cause significant numbers of coins from Persia or the Transcaucasus to end up in Spain, thousands of kilometers away. Both the long-term norm and the unusual events are important to understanding the structure and capabilities of political actors in this period.

You, Yawei and Dorian Fuller

[51]

Transcending the Niche of a Wild Progenitor: An Ecological Niche Perspective on the Spread of Archaeological Soybeans in China

This study investigates the influence of climate change on the distribution and adaptation of wild soybeans and how it impacted ancient gathering/farming practices related to soybeans. Through quantitative pollen-based reconstruction and ecological niche modeling, it traces the effects of climate change on soybean domestication and post-domestication developments. During the early Holocene (9000–7000 cal BP), the presence of soybeans started to shift from highly suitable to less suitable areas due to climatic fluctuations. This underscores the significant role of climatic factors in shaping soybean distribution during this period. Starting around 5,000 years ago, farmers, in response to climate challenges, began employing varietal diversification strategies in soybean cultivation. The 4.2 ka BP climatic event, characterized by deteriorating precipitation and temperature conditions, accelerated the development of soybean landraces. These varietal diversification strategies likely facilitated the spread of soybeans into different regions, including their movement southward into Fujian and Yunnan and westward into Gansu.

Young, D. Craig [326] see Duke, Daron

Young, Lisa (University of Michigan)

[305]

Bringing Artifacts Home: The Opportunities and Challenges of Collaborative Interpretation

Place and context give meaning to the artifacts that archaeologists uncover. Yet, artifacts are usually curated in museums and archaeological repositories far from the sites where they were unearthed. This spatial disconnect is often a source of tension for descendant communities. Using the Homolovi State Park in northeastern Arizona as a case study, I examine how exhibit development involving collaboration between archaeologists and members of the Hopi Tribe provided a context to reconnect artifacts with their place of origin. Interpretative projects, such as this one, can also enhance the goals of collaborative archaeology projects beyond field seasons and research projects while also contributing to tribal heritage initiatives. These types of initiatives also face challenges (e.g., funding, sustainability, and secure exhibit spaces) that require project partners to think “outside the box,” both literally and figuratively. Collaborative interpretative projects can also contribute to decolonizing museum practice and tribal initiatives to foster respect for the footprints of their ancestors.

Young, Mark [49] see Beaulieu, Dawson

Young, Michelle (Vanderbilt University), Colin Cooke (University of Alberta), Emily Kaplan (Smithsonian NMAI), Gabriel Prieto (University of Florida) and Jacob Bongers (University of Sydney)

[37]

No Smoking Gun: The Potential and Limitations of Isotopic Sourcing of Archaeological Cinnabar in the Central Andean Region

Identifying spatial patterns and diachronic changes in the intensity and range of the circulation of goods can provide crucial insights into shifting economic, social, and political organization of ancient societies. As such, archaeologists interested in identifying evidence of long-distance interaction in the past have increasingly turned to geochemical methods to trace the movement of nonlocal resources. In the archaeological record of the Central Andean region, cinnabar pigment is one of a few notable nonperishable resources with a limited number of geological sources. Drawing from a wide range of specimens from both museum collections and scientifically excavated archaeological materials, we explore a novel, multi-method approach for sourcing cinnabar ore, comparing isotopic ratios detected with MC-ICP-MS for mercury (Hg) and IR-MS for sulfur (S). Our results offer a cautionary tale for the use of sulfur isotopes in geochemical sourcing. Although we highlight the challenges and limitations of MC-ICP-MS analyses of mercury isotopes, we confirm that this method offers some promise for sourcing studies in the Andes and beyond.

Young, Michelle [324] see Cheever, Sylvia

Young, Stacey [150] see Goldberg, Kelly

Youngpeter, Christina (Washington University, St. Louis) and Erin Benson (Illinois State Archaeological Survey)

[140]

Wild and Cultivated Plant Usage of a Late Precontact Site (11SI754) in the American Bottom

The Stemler Site (11SI754), a small Mississippian settlement in the American Bottom, was occupied during the Late Stirling and Early Moorehead Phases (ca. AD 1150–1275), as the population at Cahokia and the broader region was decreasing. It has been theorized that an overreliance on maize (*Zea mays*) led to the dispersal of people from and collapse at Cahokia. This study aims to provide nuance to these regional dynamics with a study of plant resource utilization at Stemler. Through an analysis of wild and cultivated seeds crops and a comparison of their rates of usage to maize, this study will shed light on the period during which Cahokia's role as a regional powerhouse was changing and provide insight into the lives of small-scale settlements.

Youngpeter, Christina [202] see Belcher, Megan

Younie, Angela [120] see Sattler, Robert

Yu, Pei-Lin (US Army Corps of Engineers) and Atsushi Nobayashi (National Museum of Ethnology, Osaka)

[186]

Island Horticultural Technology Wooden and Woven: An Ethnoarchaeological Case from Taiwan

Horticultural knowledge played an evolutionary role in the successful colonization and occupation of islands. Compared to more durable fishing and hunting tools, gardening tools are made of perishable wooden and woven materials that rarely preserve in the archaeological record. Because women perform a large proportion of gardening tasks, their technologies are often overrepresented in plant materials and underrepresented in archaeological contexts. Ethnoarchaeology can provide valuable reference information about gardening technological systems. This paper presents an introduction to gardening tools and systems of Taiwan's Amis culture from the 1920s and 1930s, curated in the National Museum of Ethnology in Osaka. This is the first time these tools have been presented in the United States.

Yuselew, Gilbert [269] see Heitman, Carrie

Zabecki, Melissa (Arkansas Archeological Survey), Michelle Rathgaber (Arkansas Archeological Survey), Judy Costello (Shiloh Museum of Ozark History) and Kimberly Hosey (Shiloh Museum of Ozark History)

[45]

Bridging the Distance: Creating Virtual Cultural Heritage Resources for Educators

The Arkansas Archeological Survey and Shiloh Museum of Ozark History share a mission to preserve and present information about the cultural heritage of Arkansas. During the COVID pandemic, our usual route to sharing (in person presentations/workshops) was cut off. The Arkansas Archeological Survey put together a virtual program called Native American Days to bring together stakeholders to present short lessons to middle grade students about the history of Arkansas and how the Native Nations whose people once called Arkansas home live today. Each year since 2020, we have brought together archaeologists, State Park Interpreters, Tribal Historic Preservation Officers, and Native Artists to speak to students about Arkansas's history and the multitude of ways by which we understand that history. We ask speakers to align their presentations with fifth–eighth grade Social Studies standards and advertise the program to schools throughout Arkansas, eastern Oklahoma, and southwestern Missouri. There have been hiccups along the way, but the program has allowed us to reach thousands of students as well as work with members of Tribal Nations who are also interested in outreach about cultural heritage. This poster will present details of the program and advertising as well as problems that we have overcome.

Zahn-Hiepler, Samantha (University of Wisconsin, Milwaukee)

[330]

“Milwaukee’s Forest Home Cemetery Is a Place for the Living Too”: The Reemergence of Deathscape Recreation at Forest Home Cemetery

The original design and use of the Garden Cemetery deathscape encouraged recreation and social interaction among the living and the dead. Forest Home Cemetery, a historic (1850–present) Garden Cemetery in Milwaukee, Wisconsin, hosts more than a dozen events in the cemetery each year, including tours, reenactments, a 5K run/walk, Door’s Open, a Day of the Dead celebration week, and “Shakespeare in the Cemetery.” This paper explores a renaissance of Victorian Garden Cemetery recreation at Forest Home, identifying recurring themes (financial considerations, advertisement, and landscape use) and highlighting distinctive new engagements facilitated by the “changing face of death.” In recognition of Patricia B. Richards’s research emphasis on human actors, ethnographic field notes and archives, including social media platforms, were utilized to provide data on landscape use at Forest Home. I argue that we are witnessing a transformation of the deathscape at Forest Home, with implications for increased community engagement and a reimagined necrolandscape.

Zaia, Sara (Harvard University)

[207]

Practical and Applied Archaeogaming

People continue to migrate to digital/online spaces and communities, especially during and after the COVID-19 pandemic. This migration often entails constructing digital habitats and habitations as well as its own material culture and evidence of online settlement, use, and abandonment. This session presents several case studies featuring the archaeological investigation of human-occupied digital places, including GIS, photogrammetry, ethnography, and other approaches.

Zalaquett, Francisca (Universidad Nacional Autónoma de México)

[322]

Discussant

Zambrana, Jorge [157] see McCafferty, Sharisse

Zaneri, Taylor (International Institute for Social History)**[22]***Changing Rural Production Strategies during Urbanization in Medieval Lucca*

The later Middle Ages saw significant changes in the ways that humans exploited their natural environments, fueled by rising populations in cities and the development of commercial industries. This has been studied historically, often through the lens of urban elites, but it is less clear how these changes occurred from the perspective of the countryside. This paper will use the hinterland of the medieval city of Lucca, Tuscany, as a case study from 1000 to 1300, to investigate changes in the focus and intensity of agricultural production and the exploitation of animals. Conducting a regional analysis, this work will combine GIS land-use modeling with zooarchaeological data to provide an integrated picture of how the agricultural economy shifted over these 300 years. It will also stress the importance of the decisions of rural producers, who over this period, shifted their productive activities to participate in wider commercial interactions. As such, production became increasingly specialized by environmental zone. I will argue that such shifts were not only driven by elite and urban demands but were, in part, the result of the decisions of producers themselves, who altered their productive activities to take advantage of new economic opportunities and possibilities.

Zanotto, Hannah [125] see Vázquez López, Verónica

Zavala, Georgia**[41]***Analysis of Burned Hematite from Boxed Springs Site (41UR30)*

Boxed Springs (41UR30) is an Early Caddo archaeological site, known for its earthen mounds and looted cemetery. Gradiometer results from 2020 revealed multiple circular features throughout the southern area of the site, likely indicative of domestic structures. In addition to presumed structures, gradiometer results indicated several anomalies, which were hypothesized to be a storage pit, midden areas, or hearths. The present study provides an analysis of a burned hematite feature identified from the gradiometry survey that was uncovered in the summer 2023 season. This feature provides insight on hematite processing, which is an important raw material for pigments. The hematite feature has the possibility of providing further interpretive hypotheses regarding Early Caddo lifeways.

Zavalla, Nakia [8] see Gusick, Amy

Zavodny, Emily [200] see Boal, Zachary

Zavodny, Emily [67] see Whelton, Kathryn

Zban, Fisher [213] see Hart, Thomas

Zborover, Danny (British Museum)**[252]***Chair***Zborover, Danny (British Museum) and John Pohl (CSULA)****[302]***Codices, Purpura, and Pirates: The Enduring Legacy of Zelia Maria Magdalena Nuttall*

Trailblazer, dirt archaeologist, influencer, historian, disrupter, curator, socialite, ethnographer, polyglot. Most of us are familiar with Zelia Nuttall mostly through her brilliant research on the Mixtec codex that, until recently, carried her name on the catalogue of the British Museum where it is currently kept. Only the tip of

the iceberg in her diverse career, Nuttall has recently been recognized as one of the most prolific Mesoamericanists and anthropologists at the turn of the twentieth century. This was no small feat, especially for a female scholar with Mexican heritage, and a single mother, who constantly had to fight restrictive paradigms, academic chauvinism, and personal hurdles. In this presentation we will revisit three aspects of Nuttall's research legacy: codices, purpura, and pirates. Drawing from our recent fieldwork along the Oaxacan Pacific coast and previously unpublished sources, we will demonstrate how these seemingly disparate lines of interests are closely interconnected from a transhistorical and global perspective. Through her interdisciplinary vision and acute attention to detail, Zelia Nuttall not only laid the foundations for contemporary reconstructions of these transcontinental maritime and terrestrial networks, but also for a methodological framework that is best suited for collaborative research today.

Zborover, Danny [302] see Buti, David

Zborover, Danny [252] see Pohl, John

Zeanah, David (California State University, Sacramento) and Robert Elston (University of Nevada, Reno)

[35]

Sexual Division of Labor and Technological Change at the Pleistocene to Holocene Transition in the Great Basin

A recent reinterpretation of global ethnography challenges the “men hunt, women gather” stereotype, finding cross-cultural evidence that women regularly hunted in foraging societies. Another study finds bioarchaeological evidence of women's role in hunting large game during the Pleistocene-Holocene Transition in the Americas. Although provocative, these findings provide no theoretical context for understanding variability in sexual division of labor or for anticipating consequent effects on the archaeological record. They do resonate with earlier studies of contemporary foragers based on Human Behavioral Ecology. While reliable higher energy resource availability aligns men's and women's prey choice, unreliability causes their foraging objectives to diverge. Shifts in the reliability of resource procurement prompt gender-based labor shifts that further influence technological investment. When large game is secure, both genders invest in technology that reduces the costs of hunting and processing larger prey. Conversely, divergent subsistence strategies lead women to invest more in technology that reduces the handling costs of low yield but reliably acquired resources. These dynamics shed light on pivotal technological shifts in ground stone, bone, and basketry technology during the Early Holocene in the Great Basin.

Zedeño, María Nieves (University of Arizona) and François Lanoë (University of Arizona)

[333]

World Visions: Plains Vision Questing as Epistemology

We combine archaeology, oral history, and ethnography to argue for the epistemological power of visions and their complementary role—along with ontology and ordering schemes—in the fabric of Native American philosophies and practices. Waking visions and dreams are central to the long-term cultural history of Plains people. Among the Blackfoot, for example, they are closely related to coming of age, spiritual vows, and acquiring enough knowledge to become “elders” in society. Archaeology and cultural practice indicate a close connection between vision questing and specific landforms as well as connections with stunning viewsheds. We provide illustrations from recently recorded, high-elevation vision quest sites in the northern Rocky Mountain Front.

Zedeño, María Nieves [136] see Bridgeman, Lauren

Zeder, Melinda (Smithsonian Institution)

[85]

Discussant

Zegers, Aymara [158] see Lira, Nicolas

Zeidler, James (Colorado State University)

[161]

Discussant

Zeisel, Jake [105] see Foe, Aldo

Zejdlik, Katie (Western Carolina University)

[330]

Mothers, Mentors, and Belonging in the Academy: The Unintentional Legacy of Patricia Richards

Mothers in academia occupy the intersection of two demanding worlds: the rigors of scholarly pursuits and the responsibilities of childrearing. They face systemic barriers, including gender bias, limited access to resources, and inflexible tenure-track structures. Balancing research, teaching, and motherhood can be a precarious juggling act and women are often told to choose a career or a family. Pat Richards's unintended legacy demonstrates that women can do both. Pat successfully raised her children on archaeological projects. She embodied the resilience and innovation of academic mothers, and she inspired other women to do the same. This presentation provides an overview of mothers in the academy, specifically anthropology and archaeology. It will highlight the ingenuity and tenacity of mothering during field projects and how women have succeeded through the use of mentorship networks, advocating for family-friendly policies, and challenging traditional notions of academic success. Finally, it will argue that by acknowledging the unique struggles of academic mothers and celebrating their accomplishments, we can work toward a more inclusive and equitable academic landscape. Mothers in academia not only advance knowledge but serve as inspirations, paving the way for future generations of scholars and female scientists.

Zejdlik, Katie [68] see McGrath, Katie

Zejdlik, Katie [300] see Passalacqua, Nicholas

Zejdlik, Katie [68] see Silva Carvalho, Carlos

Zelenetskaya Young, Tatiana (Temple University)

[114]

Spinning Makes the World Go Round: Spindle Whorls from Nohcacab, Q. Roo, Mexico

A spindle whorl was an integral tool in textile production, it had social, religious, political, and economic significance for the ancient Maya. The spindle whorls carried many roles such as functional tools, symbolic displays, gender, and status representations while interconnecting traditions, mastery, and the artistic expression of a weaver.

Zender, Marc (Tulane University)

[90]

Contributions of the Kerr Corpus to Maya Paleography: Aspects of Sign Development, Regional Variation, and Idiosyncratic Style in Maya Writing

Paleography (from Greek παλαιό- 'old' and γράφει 'writing') was long understood as the study of the origins and development of signs (e.g., *De Montfaucon, Paleaeografica Graeca*, 1708), but since the welcome focus on ductus (i.e., shape, stance, and stroke-order in sign-formation) pioneered by Mallon in *Paléographie romaine* (1952), paleography has instead come to be understood as the unconscious habit of scribes in revealing when and where their texts were composed on formal considerations alone. This study intends the term in both senses and seeks to cast light on the significant contributions that Justin and Barbara Kerr have made to present understandings of the origins and development of Maya writing through their assiduous compilation

and remarkably unrestricted dissemination of a considerable corpus of Maya vessels. Close study of over 1,000 high-resolution images of hieroglyph-bearing ceramics in their corpus has provided considerable information on the iconic origins, formal developments, and regional variation of Maya writing across several centuries of use (ca. 250–900 CE). As will be seen, these precious records also make possible considerable nuance in the paleographic dating of undated inscriptions, and the identification of repainting and outright forgeries that might otherwise serve to mislead scholarship.

Zhang, Ji [315] see Lam, WengCheong

Zhao, Xiaohan [19] see Qin, Xiaoli

Zheng, Xinyuan [337] see Briggs, Emily

Zhou, Wenli [315] see Lam, WengCheong

Zhou, Zhiqing [51] see Lin, Kuei-chen

Zhou, Zhiqing [315] see Wang, Li-Ying

Zhuniskhanov, Aidyn [23] see Tashmanbetova, Zhuldyz

Zimmerle, William

[244]

Analyzing Images from the Jebel Qara Environment: Preserving Painted Rock Art in the Cave Shelters of Southern Arabia

Protected in cave shelters, Dhofar's painted rock art in Oman are well-preserved and give an unprecedented glimpse into Arabia's pre-Islamic history. The pictographs and accompanying South Arabian inscriptions, which extend from the coastal plain to the Rub' Al Khali desert and to the Jebel Qara mountains at the beginning of the incense trail, where the history of frankincense began globally in the first millennium BC. The rock art of the mountains, painted in red and black ink, depict images from the natural environment that are classified as flora and fauna indigenous to the local landscape, including also hunting-battle scenes, ritually dressed figures, dhows and other types of ships, pastoral-life scenes, wadi-maps, alphabetic letters, and hand prints that possibly invoke protection. This paper presents an analysis of scenes and features, including high-resolution photographs curated and photographed as a cultural heritage preservation and conservation project for the Sultanate of Oman. The exhibition under the auspices of the Diwan of the Royal Court has traveled since 2017 in the USA. As a community-based, digital humanities preservation project, it consists of 31 high-resolution photographs, digitized charts, and 3D images from seven archaeological field sites, along with ethnographic and epigraphic research in Dhofar.

Zimmerman, Michael (Bridgewater State University), Mikheil Elashvili (Ilia State University, Tblisi, Georgia) and Giorgi Datunashvili (Ilia State University, Tblisi, Georgia)

[38]

SIMuR Simulation: The Interdisciplinary Creation of a Virtual Reality Environment Archaeological Pedagogy, Research and Outreach

In 2019, a three-year NSF IRES grant (#1854153) was awarded to Bridgewater State University, Ilia State University, and the Cyberarchaeology Lab at UC San Diego to engage US undergraduate students in

interdisciplinary research of historical and ongoing human-environmental interactions in the Shiraki Plateau in the southeastern part of the country of Georgia. Part of this multidisciplinary project was to develop components of an interactive virtual collection of archaeological artifacts from cultural sites and hydrological data from the Shiraki Plateau, as well as a virtual reality (VR) environment for education and outreach. This resulted in the creation of two distinct virtual environments—the Virtual Museum of Archaeology of South Caucasus (VMASC), an interactive virtual collection of artifacts from the archaeological sites at Shiraki; and a virtual reconstructed environment of a general Late Bronze Age site on the Shiraki Plateau—through the work of US undergraduate students from BSU and graduate students from ISU. This presentation is designed to show the work of these students and scholars, particularly Giorgi Datunashvili of ISU, and to demonstrate future applications of this and other VR environments for archaeology in California, Massachusetts, and in Georgia.

Zimmerman, Paul [60] see Goodman, Reed

Zimmermann, Mario (Boise State University), Anna Berim (Washington State University), Korey Brownstein (USDA Functional Foods Research), Barry Hewlett (Washington State University) and Philippe Charlier (Université Paris-Saclay)

[190]

Tracing Cannabis in the Historic Past: New Insights from Chemical Residue Analysis

Today, marijuana consumption is becoming decriminalized across the Western world. This legal change is often followed by increased research activity, specifically regarding crop “improvement” and the concentration of the plant’s psychoactive compounds. This situation resembles the process characterizing the commodification of tobacco during the colonial era. Nonetheless, while archaeologists, historians, and others have accumulated an important body of evidence around the distribution, repurposing, and impact of tobacco in new consumer populations, the same cannot be said for psychoactive cannabis. Empirical data about its initial move from southern Asia to eastern Africa, its journey across the continent, and its eventual spread to the Americas remains scarce. This appears to be partially due to the low preservation potential of major cannabinoids such as THC and CBD. Here, we will present the ORA results of ethnographic and historic African pipes. Our discussion will focus on the potential of minor cannabinoids to serve as biomarkers in the analysis of residues that have undergone pyrolysis. We hope that more accurate protocols for the study of archaeological artifacts can help in reconstructing the history of cannabis. More importantly, a clearer picture of past shifts in consumer dynamics could contribute to inform present-day policy debates.

Zirah, Séverine [259] see Jiménez Cano, Nayeli

Zoiss, Emma [34] see Snow, Meradeth

Zonno, Sabina [141] see Dodd, Lynn

Zori, Colleen (Baylor University) and Davide Zori (Baylor University)

[91]

Living with an Etruscan Past: Medieval Use of Earlier Architecture and Artifacts at San Giuliano (Lazio Province, Italy)

Excavation and analysis of material culture is one way that scholars in the present endeavor to understand the people of the past. At the same time, we must consider that these people had encounters with their own archaeological history, made manifest in material objects, tombs, and architectural ruins of previous societies. In this paper, I explore how the medieval inhabitants of San Giuliano, a fortified castle site in Lazio province (Italy) dating to the tenth–thirteenth centuries, made use of the remnants of earlier cultures. I explore how

San Giuliano's medieval inhabitants reutilized numerous components of the earlier Etruscan occupation of the San Giuliano Plateau, dating to the sixth–third centuries BC and representing the last time that the plateau had seen extensive residential, civic-ceremonial, and mortuary activity prior to the medieval occupation. I focus primarily on the reutilization of constructed spaces both above and below ground, ranging from the medieval clearance and reuse of an Etruscan *cuniculo* (a subterranean water management tunnel) to the transformation of a crumbling Etruscan temple into a Christian chapel and associated cemetery. This research contributes to a burgeoning conversation regarding how people in the past understood, reused, and reshaped the material remains of their predecessors.

Zori, Davide (Baylor University)

[91]

Creating Diasporic Scandinavian Identities in Viking Age Iceland

The Viking Age migrations that settled the North Atlantic resulted in a diaspora, creating a series of colonies that looked back to Scandinavia for their shared historical identity. This paper focuses on the diasporic experience in Iceland and the formation of a new Icelandic ethnic identity. The origin and ethnicity of the settlers of Iceland can be approached through written sources, archaeological remains, isotopic analyses, and genetic studies. Written sources—sagas, chronicles, law books—agree that the population consisted of mostly (though not exclusively) Norse settlers from Norway and the Scandinavian colonies in the British Isles. Recent genetic studies support a multiethnic origin of the Icelandic settlers. However, the texts and the genetics diverge in the proportions of the settlers vis-à-vis their places of origin. A somewhat more homogeneous picture is provided by the archaeological record, which has yielded the material correlates of a relatively uniform identity that is culturally Norse and religiously Norse pagan. This paper reviews the diverse datasets available for Viking Age Iceland to unravel the complex picture of the origins of the early Icelanders and the processes involved in the subsequent genesis of a new Icelandic identity.

Zori, Davide [91] see Zori, Colleen

Zou, Qiushi

[19]

Water and Land: A Case Study of Panlongcheng in the Middle of Yangtze River

In the past few decades, research on the Panlongcheng site has achieved important results and progress in many aspects, but few scholars have discussed the site's geomorphological environment, especially the water environment. Researchers have long believed that the environment and landscape of Panlongcheng we see today are no different from the early Shang period. However, recent archaeological discoveries indicate that there may still be some cultural remains underwater. Therefore, we used a combination of underwater surveys, drilling, and digital mapping to expand our knowledge of the landscape of Panlongcheng during the early Shang period. This included mapping the lake basin through single-beam echo sounders and drilling to preliminarily observe the stratum and collect samples underwater. We also conducted radiocarbon dating on the samples collected at the bottom of the lake. The result indicates that the lake was formed not earlier than 1100 BC, which means that there was no lake during the early Shang period. Therefore, the landscape and environment of Panlongcheng and other related issues should be reexamined. In addition, we hope that the methods we used in this research may also provide some help and inspiration for related archaeological work in shallow water areas in inland China.

Zuccarelli Freire, Veronica (Max Planck Institute of Geoanthropology)

[242]

Precolumbian Water Management in the Andean Puna and Neotropical Forests of NW Argentina: Strategies for Sustainability in Contrasting Environments

Agropastoral landscapes in South America boast complex and diverse geographies and histories. Numerous investigations have revealed that the contrasting environments in the Andes, far from remaining pristine,

underwent extensive transformations by past human societies, which have had lasting repercussions on their biodiversity and soil morphology. In this study, our objective is to assess and compare the water management techniques employed by precolumbian communities in the high Andean plateaus and the eastern Neotropical forests of NW Argentina, using an interdisciplinary approach that incorporates soil analysis (microremains and biomarkers), spatial analysis, and ethnographic research. The examined occupations in the arid Andean region of Cusi Cusi (Jujuy, Argentina) span from AD 1200 throughout the Inka and colonial periods. Meanwhile, our case study in the eastern forests of Catamarca province covers a period between AD 500 and 1000, marked by extreme climatic fluctuations. This research aims to shed light on both the positive and negative outcomes of the techniques employed in these highly contrasting environments, with a primary focus on their sustainability.

Zuckerman, Molly (Mississippi State University)

[143]

Discussant

Zuniga, Linda (Kutztown University) and Khori Newlander (Kutztown University)

[265]

Gaining Insight into Lithic Technology in East-Central Pennsylvania through the Study of an Amateur Collection

The farm fields of east-central Pennsylvania contain an abundance of artifacts that span much of regional prehistory. Not surprisingly, many of these artifacts have been collected by local amateurs. Here, we analyze an assemblage of projectile points collected from the Kramer Farm in Kutztown, Pennsylvania. We explore how morphometric attributes (e.g., size, shape), indices of retouch, and raw material vary in relation to projectile point type. Our analysis provides insight into projectile point design and evolution, lithic resource preferences, technological organization, and land use. Despite the imperfections that often characterize amateur collections and the controversy that surrounds their study, our study demonstrates that collaboration between archaeologists and collectors can be beneficial, as archaeologists gain access to artifact assemblages that expand our understanding of the past.

Zuniga, Linda [41] see Newlander, Khori

Zupancich, Andrea [247] see Boric, Dusan

Zurita Noguera, Judith [309] see Arieta Baizabal, Virginia

Zurro, Debora (Human Ecology and Archaeology, IMF-CSIC, Spanish Council for Scientific Research)

[119]

Chair

Zurro, Debora (Human Ecology and Archaeology, IMF-CSIC, Spanish Council for Scientific Research), Ximena Power (Independent Researcher), Luca Sitzia (Universidad de Tarapaca, Chile) and Virginia Ahedo (Universidad de Burgos)

[119]

Creating Frames of Reference for Seaweed Consumption in the Americas: A Cross-Cultural Approach

Though seaweed consumption has only been exceptionally documented in most archaeological contexts, ethnographic data accounts for the extensive and intensive use of seaweeds and seagrasses. This study uses ethnographic data to propose new hypotheses that can inform future archaeological research by showing recurrent and non-case-specific choices. In this paper, we present a preliminary study aimed at investigating

the different types of seaweed consumption across Indigenous societies from North, Central, and South America. We use the eHRAF (Human Relation Area Files) ethnographic databases corresponding primarily to the nineteenth and twentieth centuries in order to retrieve data on how these societies use a number of seaweed species for different purposes. The study shows the uses of seaweed for food, salt, seasonings, and as a commercial resource. Seaweeds were also integrated into recreational and social activities, as well as into the symbolic dimension. Such results will allow us to assess the relative importance of seaweed consumption in hunter-gatherer, horticulturalist, pastoralist, and agriculturalist societies.

Zurro, Debora [119] see Arinyo I Prats, Andreu

Zwyns, Nicolas [281] see Izuho, Masami

Zygodlo, Gabriela (Hunter College, CUNY)

[110]

The Urban Grid: Connecting Water Management and City Organization in Nixtun-Ch'ich'

Nixtun-Ch'ich', a Middle Preclassic settlement along Lake Petén Itzá is known for its city organization. Nixtun-Ch'ich' has been surveyed in a variety of ways including a theodolite with an electronic distance measurement (EDM), total station, lidar, and photogrammetry. These various maps of Nixtun-Ch'ich' show how the central axis, urban grid, and fossa—i.e., the water management and city planning—work with the natural topography to protect it from the elements and to encourage social interaction. As a result, these public goods further demonstrate how Nixtun-Ch'ich' was a “collectively organized city center,” with less of a focus on leadership and more of a focus on tying citizens/occupants to the city.

Zygodlo, Gabriela [275] see Pugh, Timothy