

**ABSTRACTS OF THE  
74TH ANNUAL MEETING**

**April 22–26, 2009  
Atlanta, Georgia**



**SOCIETY FOR AMERICAN ARCHAEOLOGY**

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## SYMPOSIUM ABSTRACTS

[1] SYMPOSIUM ■ **ARCHAEOLOGY BEYOND ARCHAEOLOGY**

Advances in archaeological methods and the expansion of fieldwork around the world have led to an enormous growth in data and interpretations about past human societies. Although the new findings have implications for many disciplines outside of archaeology, these connections remain poorly explored. Scholars in other disciplines find it difficult to navigate the specialist literature in archaeology, and archaeologists have made only limited attempts to present their data for outsiders. The participants in this symposium show how archaeologists can contribute to wider realms of scholarship in the historical, social, and natural sciences.

[2] GENERAL SESSION ■ **RECENT RESEARCH IN CENTRAL AMERICAN ARCHAEOLOGY**[3] GENERAL SESSION ■ **FORAGERS AND FARMERS OF THE AFRICAN HOLOCENE**[4] GENERAL SESSION ■ **BIOARCHAEOLOGY**[5] SYMPOSIUM ■ **THE ARCHAEOLOGY OF ARCHAEOLOGY: DIGGING UP OLD COLLECTIONS**

In the Principles of Archaeological Ethics of the SAA, preservation of archaeological materials and their accompanying records is important enough to warrant its own section (Principle 7). The use of these collections justifies their collection and curation, but often archaeologists are steered away from working on existing collections because such projects are less prestigious than those that require excavation of new materials. Collections research also carries with it difficulties in terms of access, poor preservation, and lack of accompanying documentation. The papers in this session will focus on the challenges and benefits of doing research on extant collections of artifacts.

[6] SYMPOSIUM ■ **NEW PERSPECTIVES ON OLD ISSUES IN MAYA STUDIES**

The continuing growth and advancement of Maya studies has highlighted many problematic, though widespread, issues in the scholarly literature on the topic. We are now in the position to develop increasing specificity in the vocabulary we use and the viewpoints we adopt. This session will introduce several case studies that reevaluate and augment established methods of studying ancient Maya culture and the material record. Participants will apply new perspectives to traditional approaches, reanalyze commonly used terminology, and reconsider frequently accepted concepts.

[7] FORUM ■ **TOWARD A NEW CURRICULUM: THE FUTURE OF APPLIED ARCHAEOLOGY IN HIGHER Education***(SPONSORED BY SAA COMMITTEE ON CURRICULUM)*

Demand is increasing for curricula that prepare students for careers in applied archaeology, defined as the application of archaeological research and results to contemporary human problems such as cultural resource management, heritage tourism, human/environment dynamics, and public education. This forum brings together experts from all over the world who will draw on their own experiences with archaeology education in and beyond academia to assess the "Recommended Model Curriculum for a Master's in Applied Archaeology," created by the SAA Committee on Curriculum. The objective of this forum is to promote international dialog and explore the diverse paths along which such curricula might proceed.

[8] SYMPOSIUM ■ **ARCHAEOLOGIES OF ANXIETY**

This session addresses the archaeological study of anxiety, and aims to explore the shifting role that such states as fear, apprehension, and worry played in the constitution, reproduction, and transformation of social life. Papers will examine personal, subjective anxiety realized through daily practice, as well as the agitation and concern that comes from class or factional struggle, warfare, environmental degradation, and personal turmoil. Papers will address the material dimension of rites and performances related to the mitigation and negotiation of anxiety as well as the role of material culture in constituting periods or episodes of anxiety.

[9] GENERAL SESSION ■ **NORTHEAST AND MID-ATLANTIC ARCHAEOLOGY**[10] GENERAL SESSION ■ **ARCHAEOLOGY OF THE CASAS GRANDES, HOHOKAM, AND ADJACENT REGIONS**

[11] SYMPOSIUM ■ **RECENT RESEARCH ON MESOPOTAMIAN URBANISM: ORIGINS, STRUCTURE, ECONOMY**

Recent years have seen interesting developments in the study of Mesopotamian cities. In northern Mesopotamia (modern NE Syria and SE Turkey), fieldwork is increasingly directed toward large questions of structure and demography, patterns of growth, subsistence and political economy, administration, and social organization. For southern Mesopotamia, archaeological research has employed new methods and innovative use of old datasets, particularly remote sensing and agent-based modeling. This session will highlight recent research from urban origins to the capitals of empires, and to introduce it to a broader audience of scholars of early urbanism via a comparative perspective.

[12] SYMPOSIUM ■ **RECENT ADVANCES AT TIWANAKU, BOLIVIA: MOLLO KONTU'S JACH'A MARKA PROJECT**

For centuries (ca. AD 500-1100), Tiwanaku was the ceremonial and political core of a prehispanic state centered in the Lake Titicaca Basin of Bolivia. Recent research has suggested that the capital city of Tiwanaku comprised various social groups differentiated by socioeconomic status and/or ethnic or ethnic-like affiliation. Excavations, surveys, and on-going laboratory analyses in the Mollo Kontu sector of the site have generated data to further explore these hypotheses. This session presents the preliminary findings from Mollo Kontu domestic and mortuary contexts, which are contributing to our understanding of urban life and death in this Tiwanaku neighborhood.

[13] SYMPOSIUM ■ **TECHNOLOGY AS PRACTICE: POLYCHROME AND GLAZE-PAINTED POTTERY IN THE LATE PREHISPANIC AMERICAN SOUTHWEST**

Polychrome and glaze-painted pottery characterized by similarities in color schemes, painting techniques, design layouts and decorative motifs are a hallmark of communities in the American Southwest from the late 13th through 17th centuries. The origin, spread and demise of these traditions occurred within contexts of massive demographic upheavals and social change. Participants in this symposium use new data to contextualize the social conditions under which polychrome and glaze-paint technologies were adopted as well as conditions under which they went out of use. These studies provide a window into processes of culture change among the late prehispanic and early colonial Pueblos.

[14] SYMPOSIUM ■ **INDIANS IN CAROLINA 1600-1860: RECENT ARCHAEOLOGICAL RESEARCH**

Recent investigations of Carolina Indian sites permit examination of the role of Native groups in the development of the colony/state(s). Indians were integral to the success of Carolina. Trade in deer skins and slaves drove the early economy; the deer skin trade continued to be important throughout the 18th century. Coastal Indians provided land and foodstuffs to fledging settlements. The Yamasee dominated Indian slave trade, and provided military support against the Spanish and other Indian groups. The Catawba and Cherokee became established partners with the colonial/state governments. Recent research highlights the effects of Indian/colonist interactions on Native culture and society.

[15] SYMPOSIUM ■ **NEW PERSPECTIVES ON MOCHE WARFARE**

The last two decades have witnessed exciting new developments in Moche archaeology, and new research has compelled scholars to reevaluate previously accepted models of Moche political organization. One important subject that stands to benefit from further academic discussion is the sociopolitical significance of Moche warfare. Previous studies have debated whether archaeological signatures of warfare and ubiquitous iconographic depictions of battle are best interpreted in terms of mythological norms, as ritual contests, as "secular" conflicts, or a combination of ceremonial and strategic combat. Recent bioarchaeological analysis has also shed light on how militarism may have mediated Moche identity politics and inter-polity relations. The symposium will mobilize a diverse array of perspectives to determine how archaeological analyses of warfare can improve knowledge of Moche political structure, social control, elite culture, religious institutions, ideologies of alterity, and historical change. Ultimately, a consideration of the particulars of Moche warfare should advance theoretical understanding of the intimate relationships linking political hierarchy with violence, religion, and militarism in past societies.

[16] SYMPOSIUM ■ **SETTLING SOME ISSUES: PERSPECTIVES ON SOCIAL ORGANIZATION AND PASTORALISM IN PREHISTORY**

Pastoralist studies in archaeology focus primarily on data gathered from mortuary and ritual contexts to model socioeconomic and political organization. As such, settlement/habitation data

have largely been relegated to the background of research on pastoralism in prehistory. This session aims to bring these data center stage and to provide an outlet for the presentation of comparative research on ancient pastoralist social, economic and political organization. To do this, a variety of case studies are offered, highlighting the complex nature of how and why territory is occupied and exploited by pastoralists from the Peruvian Andes to the steppe grasslands in Mongolia.

[17] SYMPOSIUM ■ **MOUNDS, TOWNS, THEORIES, AND NUMBERS: CELEBRATING THE CAREER OF CHRISTOPHER S. PEEBLES**

Throughout his career, Chris Peebles has integrated sophisticated theoretical perspectives with the most modern technology, while never losing sight of the fundamental importance and joy of field archaeology. From his well-known work at Moundville through his role as director of the Glenn A. Black Laboratory at Indiana University, he has inspired his students as he converted them to colleagues. The diverse papers in this session show how Chris' influence extends far beyond "a very small patch of the past" in Alabama. They also celebrate and emulate the great respect for him that he has consistently shown for his own inspirators.

[18] POSTER SESSION ■ **SOUTHWEST POSTER SESSION**

[19] SYMPOSIUM ■ **INVESTIGATIONS IN THE CUPUL REGION OF THE NORTHERN MAYA LOWLANDS: THE XUENKAL ARCHAEOLOGICAL PROJECT**

Four seasons of archaeological field research at Xuenkal have documented the history of a polity that was settled by the Late Preclassic (300 B.C. – A.D. 300) and occupied continuously through most of the Classic period (A.D. 300 – 1000). Xuenkal's occupation is spatially continuous and expansive in the transition from the Early Classic to Late Classic periods, when the settlement reached its apogee. A primary goal of the project is to understand the impact of Chichén Itzá on other settlements in the Cupul region, and in turn to investigate the role that inhabitants of Xuenkal and the surrounding hinterlands played in the regional economy. A substantial Terminal Classic occupation containing high percentages (90-99%) of Sotuta sphere ceramics –and a change in settlement pattern from dispersed residences to freestanding platforms supporting multiple residential structures -- associates the site with Chichén Itzá and distinguishes it from other major centers in the northern Maya Lowlands during this time. This session will present results of household excavations with associated craft production areas, regional mapping and reconnaissance.

[20] SYMPOSIUM ■ **ARCHAEOLOGY OF PUEBLA-TLAXCALA**

The session brings together investigators who study the prehistory and history of the Puebla-Tlaxcala region using archaeological evidence. This area has a rich but as yet poorly understood culture history and played an important role in the social and political developments of both the pre- and post-Conquest periods. In order to foster communication and promote interest in the region, a variety of investigators will share their latest work and set the stage for future cooperation and collaboration.

[21] SYMPOSIUM ■ **INTERACTION AND DOMAINS IN SOUTH ASIA AND THE OLD WORLD: PAPERS IN HONOR OF GREGORY L. POSSEHL**

For over 35 years Gregory L. Possehl has conducted extensive archaeological research in the Quetta Valley, Gujarat, Rajasthan, and Oman. His original research, compilation and synthesis of separate site reports and notations lead to broader understanding of the Indus Civilization and interaction across South, Central, and West Asia. Possehl's concept of domains explains both variation and coherence in material culture across the Indus. His model of third millennium Middle Asian Interaction Sphere (MAIS) is supported by evidence at multiple sites. Papers in this session present contemporary research influenced by Possehl's work ranging from ceramic comparisons to pastoralism to paleoanthropology.

[22] Forum ■ **CULTURALLY UNIDENTIFIABLE HUMAN REMAINS POLICY: WHAT IS AT STAKE FOR ARCHAEOLOGISTS AND NATIVE PEOPLES?**

**(SPONSORED BY INDIGENOUS PERSON'S INTEREST GROUP)**

The subject of Culturally Unidentifiable Human Remains (CUHR) has long been a source of concern for both Native Americans and archaeologists. Few subjects have demonstrated the divergent interests of Native Americans and archaeologists as stakeholders as the determination of human remains as "Culturally Identifiable". We hope to address three main questions: 1) How are changes in the proposed regulation likely to impact archaeological research? 2) How are

determinations of “unidentified” arrived at and how do they affect Indigenous Peoples? 3) What is at stake for each group? This forum will discuss these difficult questions from a variety of practical and theoretical perspectives.

[23] GENERAL SESSION ■ **MIDWEST AND GREAT LAKES I**

[24] GENERAL SESSION ■ **CLASSIC AND POSTCLASSIC MESOAMERICA**

[25] GENERAL SESSION ■ **ARCHAEOLOGY OF DEATH, SPACE, AND IDENTITY IN EUROPE**

[26] GENERAL SESSION ■ **ADVANCES IN METHODS**

[27] SYMPOSIUM ■ **INVESTIGATIONS AT CERRO JAZMIN, MIXTECA ALTA, OAXACA**

This session showcases recent finds from the Cerro Jazmin Archaeological Project. The project, the first to focus on the site of Cerro Jazmin, incorporates mapping, intensive archaeological and geomorphological survey to investigate Prehispanic highland urbanism, its structure and longevity, and its immediate environmental impact on the surrounding landscape throughout the Prehispanic sequence.

[28] SYMPOSIUM ■ **FORENSIC ARCHAEOLOGY: A MULTI-DISCIPLINARY APPROACH**

Forensic Archaeology is the application of archaeological techniques to the investigation of criminal activity and/or medico legal issues. By its very nature forensic archaeology draws into itself a wide range of disciplines, experiences, and skills. Many forensic archaeological practitioners are also versed in other forensic techniques as diverse as fingerprinting, physical anthropology, entomology, and the environmental sciences to name a few. The aim of this symposium is to explore the multi-disciplinary approach to forensic archaeology. Through case studies, past and present research, the papers presented will explore the diverse skill-set necessary to those active in the field.

[29] POSTER SESSION ■ **WESTERN US POSTER SESSION**

[30] SYMPOSIUM ■ **SECOND IMPRESSIONS: ALTERNATIVE METHODS FOR EXPLORING ARCHAEOLOGICAL PERISHABLES**

*(SPONSORED BY FIBER PERISHABLES INTEREST GROUP)*

Perishable artifacts are ephemeral, and infrequently represented in the universe of archaeological sites. As perishables research advances, analysts are exploring a veritable new frontier of techniques for the study of perishable artifacts and traditions. A slew of analytical techniques may greatly expand what researchers know about the perishable artifacts from various regions and cultures even where the traditionally focused on perishable artifacts, namely textiles or baskets, are not preserved for direct observation. This expanded analytical base includes but is not limited to: employing technologies or computer-based software for anything from a myriad of artifact-specific analyses to regionally specific distributional analyses; chemical analyses of organic residues where they are present on more durable artifacts; an expansion of the types of perishable artifacts considered for physical analyses to include composite artifacts with an organic component; and, indirect analyses through impressions or casts of textiles or baskets, or their portrayal in other media, such as carvings, sculptures, paintings, or murals. The aim of this symposium is to bring these methods and techniques into focus and to consider what they have to offer perishables research as well as more general historical and archaeological pursuits.

[31] Poster Session ■ **Sharing Archaeology with the Public: Examples from the Homol'ovi Undergraduate Research Opportunities Program**

*(SPONSORED BY PUBLIC EDUCATION COMMITTEE)*

Sharing archaeology with the public is uniformly recognized as important but limited opportunities exist in research and academic settings for students to learn the skills necessary to communicate archaeological information with general audiences. As part of the Homol'ovi Undergraduate Research Opportunities Program (HUROP), undergraduate students participated in archaeological field research in a field school setting while also learning to interpret archaeology to visitors at the Homol'ovi Ruins State Park in northeastern Arizona. This session highlights the important interpretive and educational opportunities created by integrating fieldwork with public outreach with posters summarizing students' outreach projects.

[32] Poster Session ■ **NEW RESEARCH IN THE CASAS GRANDES WORLD**

Eighty-five years ago, Alfred V. Kidder described the Casas Grandes culture in his seminal

Introduction to Southwestern Archaeology. Over eight decades of research has produced a vast wealth of data; most impressively (though not exclusively) Di Peso and colleagues' massive report of the Joint Casas Grandes Expedition. Despite the available empirical evidence, much about the Casas Grandes culture remains unknown. Posters in this session examine new and old data in order to explore different aspects of this unique prehistoric culture.

[33] POSTER SESSION ■ **INVESTIGATIONS IN A GHOST TOWN: THE ARCHAEOLOGY OF HERMOSA, NEW MEXICO**

In summer 2008 a joint team of students from Howard University, Indiana University of Pennsylvania, and the Mescalero Apache Reservation investigated the ghost town of Hermosa, NM, and its environs. Published accounts suggested that the town, founded in 1883 during New Mexico's silver mining boom, was largely abandoned by 1910. Survey and excavations, however, revealed a palimpsest of different occupations in Hermosa and the surrounding valley, from ancient to modern. These student posters discuss the methods used to uncover the ghost town's past and the results of this first year of investigations.

[34] POSTER SESSION ■ **CULTURAL PATHWAYS THROUGH WESTERN COLORADO**

The numerous drainages that cross the Piceance Basin of western Colorado made that area a pathway for human movement and settlement from the Archaic through Historic times. Seemingly most intensively inhabited during the Late Prehistoric and Protohistoric periods, this area provides abundant evidence for material exchanges and cultural transitions that resulted from the immigration of new groups and the displacement or transformation of existing groups. The papers in this symposium explore diverse lines of material evidence—including lithic artifacts, personal adornments, structural forms, and site distributions—for human mobility and interaction, as well as resulting cultural transformation.

[35] GENERAL SESSION ■ **ETHICS BOWL**

[36] GENERAL SESSION ■ **NEW RESEARCH ON THE PRECLASSIC MAYA**

[37] SYMPOSIUM ■ **DOLLARS AND SENSE IN RECOVERING AND MANAGING ARCHEOLOGICAL COLLECTIONS**

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

Archaeological collections, including artifacts, records and reports, are part of the irreplaceable archaeological record, yet are in constant jeopardy of loss and inaccessibility. One reason is because the costs to recover and manage collections are significant, but often poorly understood and budgeted. Field project budgets often do not cover the expenses of analysis, conservation, and curation. Repositories struggle for resources for long-term collection preservation and accessibility. This session examines the real costs and issues involved in managing collections, from the field to the repository. Cost efficient practices are critical if collections are to remain viable data sources for future use.

[38] SYMPOSIUM ■ **RECENT INVESTIGATIONS ON THE SACRED PRECINCT OF TENOCHTITLAN: THE SEVENTH FIELD SEASON OF THE PROYECTO TEMPLO MAYOR**

The fortuitous discovery of the Tlaltecuhltli Earth Goddess monolith in 2006 generated new investigations in the ruins of Tenochtitlan's sacred precinct. Since March 2007, an interdisciplinary and international team organized by the Instituto Nacional de Antropología e Historia has carried out topographic studies, geophysical prospection, microchemical analysis, and archaeological excavation in Mexico City's historic center. These activities have produced new data regarding the precinct's urban planning, the architectural and functional evolution of its religious structures, and the symbolism and economy of Mexica rituals carried out at the foot of the Templo Mayor in the decades prior to Spanish Conquest.

[39] SYMPOSIUM ■ **COMPLEXITY AND TECHNOLOGY IN SOUTH ASIA AND THE OLD WORLD: PAPERS IN HONOR OF GREGORY L. POSSEHL**

For over 35 years Gregory L. Possehl has conducted extensive archaeological research in the Quetta Valley, Gujarat, Rajasthan, and Oman. His original research, compilation, and synthesis of separate site reports and notations have led to a broader understanding of the Indus Civilization and complexity in the Old World. By contextualizing the Indus as a complex society without the necessary structures of the state, Possehl has refocused attention on key aspects of complexity, such as the various forms of technology. This session presents contemporary research projects that have been influenced by and have responded to Possehl's work in these areas.

**[40] SYMPOSIUM ■ TRACING TRAILS & MODELING MOVEMENT: UNDERSTANDING PAST CULTURAL LANDSCAPES AND SOCIAL NETWORKS THROUGH LEAST-COST ANALYSIS**

The advent of powerful Geographic Information Science (GIS) software packages and the increasing availability of inexpensive or free digital geospatial data have made it possible for archaeologists to ask sophisticated questions about how and why agents traveled through and interacted with their surroundings. In particular, questions regarding how agents potentially defined and dealt with "cost" as a factor in travel are becoming much easier to address via GIS applications that utilize Least-Cost Analysis techniques. These methods leverage complex and dynamic agent-oriented relationships between the natural and cultural features of a landscape in order to model pathways or corridors of movement.

**[41] GENERAL SESSION ■ HUNTER-GATHERERS AND SUBSISTENCE**

**[42] SYMPOSIUM ■ RETHINKING MOUNDVILLE AND ITS HINTERLAND: PAPERS IN HONOR OF CHRISTOPHER S. PEEBLES**

For over 30 years Moundville has played a pivotal role in discussions of chiefdoms and Mississippian societies. Research inaugurated by Christopher Peebles laid the foundations for models of the development, economic organization, and social arrangements of the Moundville polity. Recent work in the Black Warrior Valley has both refined and contested these models. The papers in this symposium employ new data and perspectives to reflect on Moundville and its hinterland. The picture that emerges builds on previous work but is more detailed and ethnohistorically grounded than its predecessors.

**[43] SYMPOSIUM ■ ON SACRED GROUND: THE LIFE HISTORY OF A PLACE AND ITS PEOPLE**

Statistical Research, Inc. was contracted by Pima County, Arizona to completely excavate in seventeen months a complex 4.2-acre multi-component site in downtown Tucson. The project area includes a Late Archaic residential locus, a historical-period cemetery of over 1100 individuals, and numerous residential or commercial features that intrude or cap the cemetery. Our multidisciplinary team applies cutting-edge technology and new methodologies to investigate major research issues: long-term change in land use and social values, the mortuary practice and bioarchaeology of an ethnically-mixed 19th century population, and 20th century urban development. How are we doing it and what are we learning?

**[44] SYMPOSIUM ■ LITHIC TECHNOLOGICAL SYSTEMS: EVOLUTIONARY APPROACHES TO UNDERSTANDING STONE TECHNOLOGIES AS A BYPRODUCT OF HUMAN BEHAVIOR**

Developing methodologically and theoretically informed models of lithic technological organization is crucial to understanding how humans procured, made, and used stone for tools. Recently it has become apparent that while current models have strong methodological and experimental foci, theory is not well incorporated. A promising solution to this problem is the integration of evolutionary theory to view lithic technological systems as a byproduct of human behavior; largely a result of cultural transmission and decision making practices. By exploring this relationship, significant new insights may be gained in understanding the human behavioral components that influence the organization of lithic technological systems.

**[45] SYMPOSIUM ■ THERE ARE TWO SIDES TO EVERY STORY: INDIGENOUS RESPONSES AND MOTIVATIONS IN THE PERIPHERIES OF STATE-LEVEL POLITIES DURING THE MIDDLE HORIZON**

Examination of Middle Horizon state expansion in the Andes has largely focused upon colonial control strategies in peripheral territories ignoring responses by indigenous populations to foreign influences into their territory. This symposium brings together research throughout the central Andes that focuses on local reactions to primarily Wari and Tiwanaku expansion during the Middle Horizon, exploring a range of strategies to cope with these foreign influences. Understanding these local perspectives and responses is essential to develop more complete models for the expansion of the major Middle Horizon polities.

**[46] SYMPOSIUM ■ STILL DIGGING: OUR FOURTH DECADE OF ARCHAEOLOGY ON ST. CATHERINES ISLAND (GEORGIA)**

The American Museum of Natural History has been conducting archaeological investigations on St. Catherines Island for four decades and the digging continues. Current research objectives emphasize community patterning, subsistence and technology at the temporal extremes of the earliest (Late Archaic) and the latest (late prehistoric and mission periods) aboriginal occupations on the island. These papers summarize some of the on-going research objectives and frame the research design for present and future fieldwork.



**[47] SYMPOSIUM ■ EMERGING ARCHAEOLOGY OF BAJA CALIFORNIA: CHALLENGING PARADIGMS OF ISOLATION AND MARGINALITY**

Current research originating in Baja California challenges outdated paradigms that present the peninsula as uncomplicated in its ecological and cultural landscape. Instead of viewing the peninsula as home to isolated human populations struggling for existence in a marginal land, current research considers how the history and prehistory of Baja California has shaped – and has been shaped by – its particular geographic, geomorphological, demographic, environmental, and social characteristics. Robust prehistoric and historic records of Baja California built from terrestrial and underwater sites provide new insights on important anthropological issues of migration, colonization, interaction networks, behavioral and historical ecology, cultural complexity and missionization.

**[48] SYMPOSIUM ■ RETHINKING GARBAGE IN THE ARCHAEOLOGICAL RECORD: THEORETICAL PERSPECTIVES AND CASE STUDIES FROM THE MAYA REGION**

Western concepts of garbage as unwanted production detritus, food remains and broken objects pervade archaeological interpretations. These tropes are so widespread that artifacts, particularly in construction fill and middens, are deemed de facto refuse. So-called termination deposits, problematic deposits, reused artifacts, monuments, and architecture can, however, often confound accepted wisdom. Aside from potential ritual and symbolic implications of "refuse" in Mesoamerica, contemporary notions of recycling and reuse mandate an operational and theoretical overhaul of how we characterize Prehispanic trash. Historically, emphasis has been on behavioral aspects of waste disposal, but the proposed rethinking includes semiotic, interpretive, and practice-based theories.

**[49] GENERAL SESSION ■ LITHIC TECHNOLOGY AND RAW MATERIAL SELECTION****[50] GENERAL SESSION ■ OLD WORLD ARCHAEOLOGY****[51] SYMPOSIUM ■ OUR ANCESTORS LIVED HERE: THE VALUE OF NORTH AMERICAN INDIGENOUS KNOWLEDGE IN CULTURAL RESOURCE MANAGEMENT AND ARCHAEOLOGICAL SITE INTERPRETATION (SPONSORED BY NATIONAL GUARD BUREAU)**

Recent SAA efforts and publications recognize and debate the value of indigenous knowledge in archaeological interpretation. The March 2007 issue of the SAA Archaeological Record was a thematic issue dealing with indigenous knowledge and 21st century archaeological practice. As the introductory article pointed out, traditional knowledge is quickly disappearing and we need to document it before it is lost. The papers included in this symposium share examples from across the United States of lessons learned and knowledge gained as a result of Native American consultation, ethnographic research, and tribal contributions in the realm of cultural resource management and archaeological investigations.

**[52] POSTER SESSION ■ RECONSIDERING THE MONONGAHELA: NEW VIEWPOINTS ON THE ARCHAEOLOGY OF WESTERN PENNSYLVANIA**

Archaeologists defined the Late Prehistoric Monongahela culture in western Pennsylvania in the 1930s, but recent approaches are generating new understanding of the chronology, subsistence, and settlement patterns. These new perspectives have developed both from the reconsideration of previously excavated sites and from the discovery of new sites in the region. Posters in this session report on a variety of recent projects involving new technologies such as geophysics and geospatial mapping or on projects that have utilized more traditional archaeological data sets to arrive at new interpretations. Together these research projects suggest new directions for the study of the Monongahela.

**[53] POSTER SESSION ■ EASTERN US AND GIS POSTER SESSION****[54] GENERAL SESSION ■ SOCIAL THEORY****[55] GENERAL SESSION ■ PROTOHISTORIC AND HISTORIC PERIOD ARCHAEOLOGY IN THE SOUTHEASTERN UNITED STATES****[56] GENERAL SESSION ■ MISSISSIPPIAN CEREMONIAL CULTURE****[57] FORUM · PUBLIC EDUCATION IN ARCHAEOLOGY: HOW ARE WE DOING? (SPONSORED BY SAA PUBLIC EDUCATION COMMITTEE)**

Year 2010 marks the SAA Public Education Committee's twentieth birthday and an equivalent time since the nascent efforts of the Education and Archaeology work group to establish professional goals, standards, and practices. As these milestones approach, what is the state of

public education in archaeology? Who is doing it and where? How are professionals trained (what academic institutions accommodate students interested and how)? What is its theoretical foundation and how does it inform practice? What is best practice? This forum will consider these questions in order to evaluate the "state-of-the-state" in public education in archaeology and advocate for its future.

**[58] SYMPOSIUM ■ INNOVATIVE ANALYTICAL TECHNIQUES IN COASTAL GUATEMALAN ARCHAEOLOGY**

The session will present multiple projects incorporating geophysical and archeochemistry techniques to answer specific questions regarding areas of archaeological interest in Pacific Coastal Guatemala. Presenters will discuss projects including obsidian sourcing using LA-ICP-MS, paleoenvironmental recreation using various techniques including thermoluminescence dating and IC-PMS on a sediment core from the mangroves of coastal Guatemala, gpr mapping of a large late classic urban complex, the integration of multiple geophysical surveys, artifact distribution, and soil analysis in ArcGIS, source analysis of Plumbate pottery from La Blanca using ICP-MS, and the use of GPR to locate subsurface features associated with a large Formative period mound subjected to extensive modern disturbance.

**[59] FORUM ■ STUDENTS PRESENT! HOW TO PREPARE AND DELIVER A SUCCESSFUL PAPER (SPONSORED BY STUDENT AFFAIRS COMMITTEE)**

As students are molded into young professionals, they are told that it is their responsibility to conduct research, as well as publish, and present their findings before of an audience of their peers. Presentations are perhaps the most intimidating of these career-building requirements, and possibly also the area in which most students receive the least amount of guidance. This forum (sponsored by the Student Affairs Committee) is designed to provide an introduction to successful presenting. We will cover basic rules for talking in front of an audience and provide tips for staying on topic, keeping your talk interesting and informative, and using PowerPoint and other visual aides. We invite students and young professionals to come with questions and advice. This will be an interactive forum that allows the participants to focus the discussion in whatever direction is most helpful for them.

**[60] SYMPOSIUM ■ COASTAL ANDEAN POLITICAL INNOVATION AND TRANSFORMATION: THE MIDDLE HORIZON TO LATE INTERMEDIATE PERIOD TRANSITION ON THE NORTH CENTRAL COAST**

During the Middle Horizon-Late Intermediate Period transition, the north central coast of Peru is a place of great interpolity interaction, political upheaval, restructuring and in some cases, continued stability. The variability seen in the formation and development of Middle Horizon and Late Intermediate Period coastal polities is visible in the presence of cultural innovations in pottery, architecture and mortuary practices. Recent research is identifying these features and transforming our understanding of this period on the north central coast, revealing a newly defined landscape of political, ideological, and economic structures among neighboring polities.

**[61] SYMPOSIUM ■ CROSSING THE POND: COMPARATIVE STUDIES OF MIGRATION, IDENTITY, AND MATERIAL CULTURE IN THE U.S. SOUTHWEST AND MEDIEVAL EUROPE**

This session is focused on migration, identity formation, and the role that material culture plays in these processes. Our goal is to bring together researchers working in two divergent scholarly traditions and world regions who approach these issues with different theoretical frameworks and methods. Both the prehistoric U.S. Southwest and post-Roman Europe are characterized by frequent and widespread migration which led to broad social changes that we observe through material culture. By bringing together scholars from these different regions we hope to foster new collaborations and spread ideas between archaeological traditions that do not commonly interact.

**[62] SYMPOSIUM ■ CHARTING THE LIFE HISTORIES OF ARTIFACTS AND GOODS IN EAST ASIAN PREHISTORY AND HISTORY**

In recent decades, attempts by archaeologists to chart the life histories of artifacts and goods over time and space have been accompanied by novel perspectives into the social and political forces associated with such transformations. Focusing on East Asia, this symposium's case studies underscore the fact that antiquity and long-term constancy in political and philosophical forms in no way preclude the possibility of important shifts in the meaning and function of artifacts and goods. Significantly, these papers also point the way to artifact-based approaches that have yet to play a significant role in investigations of past societies in East Asia.

**[63] SYMPOSIUM ■ EURASIAN LANDSCAPES: OLD WORLD PERSPECTIVES ON MOBILITY, POWER, AND SYMBOL**

Research in the Old World has remained at the theoretical and methodological fore of regionally

based approaches in both the Mediterranean and across Eurasia. This symposium brings together scholars studying agrarian, pastoral, and complex societies to review current and past trends in landscape archaeology. By emphasizing the production of landscape, power, and symbol, papers may explore previously unidentified cross cultural trends in the human use of space from across the Old World.

[64] GENERAL SESSION ■ **ARCHITECTURE AND IDEOLOGY IN CLASSIC MAYA CENTERS**

[65] SYMPOSIUM ■ **RECONSTRUCTING THE NATURES OF COMMUNITIES IN THE INTERMEDIATE AREA**  
The variety of the interactions and affinities that connect households to each other, and to broader social dynamics, are of analytical interest to anthropologists and archaeologists studying the 'community'. Because social changes and continuities may be generated from these relationships, understanding the activities, forms of social differentiation, and social ties within and between communities are of critical importance. Contributors have chosen to examine communities within the Intermediate Area, noted both for its cultural diversity and stability, and assess what relevance a community focus has for themselves.

[66] SYMPOSIUM ■ **OLD QUESTIONS, NEW APPROACHES: RECENT ANALYSES OF CHACO CANYON, NEW MEXICO**

The goal of this symposium is to address fundamental questions relevant to our understanding of Chacoan prehistory. Using new data sets as well as new theoretical approaches and methods, papers will focus on four main topics: structure diversity and function, craft specialization, human remains, and subsistence. A series of recent publications have synthesized points of scholarly agreement and highlighted remaining issues of contention and debate within the scholarly community at large. Symposium participants will bring new data to bear on these persistent questions in hopes of clarifying as-yet-unresolved issues fundamental to our understanding of this fascinating chapter of southwestern prehistory.

[67] SYMPOSIUM ■ **THE SUBTERRANEAN DISCIPLINE: CAVE ARCHAEOLOGY IN THE 21ST CENTURY**

Humanity did not actually begin in caves, but it is no exaggeration to say that archaeology did. Archaeologists have worked in caves from the earliest days of stratigraphic excavation, yet a true international cave archaeology is only now emerging as a distinct sub-discipline. This session will bring together researchers from around the world in order to showcase the diversity of approaches to cave archaeology and the advances that are being made in the field. By transcending regional boundaries, we hope to stimulate discussion of some of the fundamental issues of the discipline as well as to articulate its future direction.

[68] GENERAL SESSION ■ **IDENTITY AND ETHNICITY FORMATION IN THE MAYA AREA**

[69] SYMPOSIUM ■ **IME TEAM AMERICA: AN INTRODUCTION TO THE ARCHAEOLOGY BEHIND THE PROGRAM**

Time Team America: An Introduction to the Archaeology Behind the Program Archaeology has been enjoying a great deal of exposure on television programs, but those programs focus almost exclusively on sensational finds that reinforce the Indiana Jones image of archaeology. This session is a look at Time Team America and its first season of programs. It focuses on archaeological methods rather than sensationalizing the finds. These papers address various aspects of the work carried out by the archaeologists involved. Excavation techniques, geophysics, archaeobotany, historical research, and material culture analysis have all been highlighted in the first season of filming.

[70] GENERAL SESSION ■ **PALEOLITHIC SUBSISTENCE, ECOLOGY, AND SYMBOLIC BEHAVIOR**

[71] GENERAL SESSION ■ **PRODUCTION TECHNOLOGY AND ICONOGRAPHY: RECENT ARTIFACT ANALYSIS IN SOUTH AMERICA**

[72] GENERAL SESSION ■ **CURRICULUM ISSUES IN ARCHAEOLOGICAL EDUCATION**

[73] GENERAL SESSION ■ **FORMATIVE MESOAMERICA**

[74] GENERAL SESSION ■ **ARCHAEOLOGY IN EASTERN EUROPE**

[75] SYMPOSIUM ■ **ARCHAEOLOGY IN THE BASINS OF SOUTH-CENTRAL NEW MEXICO AND WEST TEXAS: A SAMPLE FROM FORT BLISS**

In 2007, Statistical Research, Inc. (SRI) was awarded a 5-year contract for survey, evaluation, and mitigation projects at Fort Bliss in the southern Southwest. In the first two years, SRI has

undertaken numerous projects that are adding to the already significant database of the Jornada Mogollon region. In this session, authors discuss some of the more interesting sites and landscape data collected from these projects, ranging from Archaic period logistically-used campsites to early and late Formative period villages, to historic ranching sites. We summarize the research and the historic contexts, and suggest new and further directions for this continuing research.

**[76] SYMPOSIUM ■ 2009 FRYXELL AWARD: MICHAEL D. GLASCOCK AND THE MURR ARCHAOMETRY LABORATORY**

The Fryxell award is in many ways best served by recognizing someone from outside of archaeology who has made major contributions to the field. For twenty years, Michael Glascock, a nuclear physicist, has directed the Archaeometry Laboratory at MURR which is arguably one of the most active and prolific archaeometry laboratories in existence. Under Glascock's leadership, data generated at MURR have led to many significant insights concerning past human and social dynamics, especially on topics related to trade, migration, raw material consumption, social interaction. Papers in this session acknowledge and explore the contributions of Dr. Glascock to archaeology and interdisciplinary archaeological research.

**[77] GENERAL SESSION ■ USE-WEAR AND EXPERIMENTATION STUDIES**

**[78] GENERAL SESSION ■ HISTORY AND ARCHAEOLOGY IN AFRICA**

**[79] FORUM ■ INCREASING LOCAL PROTECTION FOR ARCHAEOLOGICAL RESOURCES-ONE YEAR LATER (SPONSORED BY GOVERNMENT AFFAIRS COMMITTEE)**

During last year's Annual Meeting the Government Affairs Committee hosted a forum on finding effective ways to promote and strengthen local protections for archaeological resources, and how SAA could contribute to that process. The forum was very productive in generating discussion and the sharing of ideas. This year's forum will allow participants to review the progress that has been made since the Vancouver event, and to discuss new ways of approaching this important subject. The forum will also showcase several recent examples of archaeological research conducted on the local level to highlight the achievement of local government archaeology programs.

**[80] SYMPOSIUM ■ REVISITING THE ETOWAH VALLEY: NEW DATA FROM 9CK1, THE LONG SWAMP SITE**

In the late 1930s, Robert Wauchope conducted excavations at the Long Swamp site in Cherokee County, Georgia. He located the remains of a prehistoric mound and village that contained Early and Middle Woodland, Early through Late Mississippian, and protohistoric components. Most recently, Edwards-Pitman, as part of a Georgia Department of Transportation bridge replacement project, undertook a large-scale data recovery on another section of the site. A palisade, structures, and numerous features were excavated during this fieldwork. This symposium will explore our project's findings, including geomorphology, site organization, faunal and floral remains and ceramic data and will describe how this new information contributes to our view of Mississippian life in the Etowah Valley.

**[81] SYMPOSIUM ■ BEING TIWANAKU: NEW PERSPECTIVES ON SOCIAL IDENTITY IN THE MIDDLE HORIZON**

Participation in Tiwanaku civilization was colored by a powerful and pervasive collective identity. Yet for hundreds of thousands of people in the Middle Horizon, "being Tiwanaku" also meant responding to a complex palette of ethnic, corporate, regional, gender, class, and family affiliations. Recent settlement, household, mortuary and bio-archaeology in the Tiwanaku core and diaspora has illuminated this intricate kaleidoscope of shared and particular social identities. The papers presented in this symposium will consider the balance between the socially unifying aspects of Tiwanaku culture and the pronounced and complex social diversity that led Luis Lumbreras to paint the Tiwanaku as a "pueblo polichromo".

**[82] SYMPOSIUM ■ MEMPHIS TO MUMBAI: ARCHAEOLOGY INSPIRED BY R. BARRY LEWIS**

The career and intellectual contributions, of R. Barry Lewis continue to inspire scholars and influence anthropological research from the Americas to Southeast Asia. Although his formal training and career focused in archaeology, the essence of Barry's legacy incorporates the very best of the four-field approach in anthropology. His contributions within archaeology include subsistence practices, economic organization, the structure and organization of public space, research methods, assemblage analysis, along with archaeological method and theory. The papers in this session draw on these themes through a diversity of research projects and assemblages extending from Eastern North America to India.

**[83] SYMPOSIUM ■ The Great Maya Droughts In Cultural Context**

A number of researchers have been building a case for the primary role of multi-decadal droughts in four separate episodes of ancient Maya "collapse" spanning the Preclassic to Post-Classic periods. Although the mounting data does suggest that severe droughts did occur at various intervals during this time span, problems remain with respect to the precise dating of these droughts, their actual intensity, and in terms of how they articulate with the actual culture histories of the various centers in question. The papers in this symposium critically assess the drought model using a range of archaeological and environmental data.

**[84] SYMPOSIUM ■ Crossing Boundaries: Rock Art and Cultural Identity, Part A  
(SPONSORED BY ROCK ART INTEREST GROUP)**

As a highly distinctive and immobile cultural expression, rock art is uniquely suited to studies of past cultural identity. Rock art both defines boundaries and transcends those inferred from other kinds of cultural phenomena. In the American Southeast, and throughout the world, rock art scholars are crossing geographic, cultural, and theory boundaries to explain the complexities of cultural identity.

**[85] SYMPOSIUM ■ ENVISIONING THE SHORE: NEW INSIGHTS INTO THE OCCUPATION AND ANTHROPIC CONFIGURATION OF COASTAL SETTINGS  
(SPONSORED BY JOURNAL OF ISLAND AND COASTAL ARCHAEOLOGY)**

Our session aims to explore new theoretical focuses and developments into the archaeology of coastal settings. In this session, we are keen to discuss the variety of coastal occupations that characterized shorelines around the world, with special emphasis in mound construction, midden deposition, and landscape configuration. We are particularly interested in new methods and techniques applied to the study of coastal sites in dynamic environments. We welcome all archaeologists working with innovative and interdisciplinary topics, as well as methodological and theoretical advances for the study of coastal societies.

**[86] SYMPOSIUM ■ STUDIES OF THE PRODUCTION OF SPACE IN ANCIENT CITIES**

Recent studies challenge long-held assumptions about the kinds of spaces and social relationships that constitute ancient cities, and classic means of analyzing urban space. The study of urban space is complicated by variability within and between cities, as well as their relative enormity. This session presents studies that analyze the production of urban space in a variety of ancient cities across the globe. Our goal is to advance our understanding of urban space, and ways of studying this space, with a view towards improving our ability to compare urbanism across time and place.

**[87] SYMPOSIUM ■ A BIG VIEW OF IDENTITY AND INTERACTION: MACRO-REGIONAL CULTURAL VARIATION IN THE U.S. SOUTHWEST**

This session compares broad scale spatial and temporal variation for diverse media in the prehispanic U.S. American Southwest. The papers consider the question of how far an ancient Southwesterner would have to travel before he or she encountered people who were noticeably different in their physical appearance, speech, clothing and jewelry, foods, ceramics, residential and public architecture, rock art, and burial practices. The patterns for these different characteristics are compared at the macro scale and their implications for the issues of identity and interaction in the prehispanic Southwest through time are considered.

**[88] POSTER SESSION ■ GENERAL NEW WORLD AND METHODS POSTER SESSION****[89] POSTER SESSION ■ THE GAULT SCHOOL OF ARCHAEOLOGICAL RESEARCH: PERSPECTIVES ON THE EARLIEST PEOPLES IN THE NEW WORLD**

Paleoindian research, particularly that looking at the earliest peoples in the New World, is in the midst of a tremendous paradigm shift. New data has made it essential to reevaluate old ideas and examine new methodology and technologies. The Gault School of Archaeological Research was formed with this in mind. This poster session looks at the GSAR and ongoing work at the Gault Clovis site, the continental shelf in the Gulf of Mexico and Central America.

**[90] POSTER SESSION ■ ARCHEOLOGY AND EVERGLADES RESTORATION**

The Everglades Restoration is one of the largest ecosystem restoration projects ever undertaken. This restoration project extends from the Lake Okeechobee basin south to the Florida Keys covering most of South Florida. Cultural resource support for this project in compliance with State and Federal historic preservation laws is providing archeologist with an opportunity to work in

areas long neglected. The posters in this session examine some of the cultural resource issues identified for the area and look at the results of the first surveys and site testing projects.

**[91] SYMPOSIUM ■ TOWARDS AN INTERNATIONAL INVENTORY OF PREHISTORIC MINES AND QUARRIES (SPONSORED BY PREHISTORIC QUARRIES AND EARLY MINES INTEREST GROUP)**

Despite the widespread presence of prehistoric extraction sites in the historic environment, many are overlooked or their importance unrecognised, thus placing them at risk. Although amongst the earliest examples of technology, they rarely receive World Heritage Site status, and some have no legal protection at all. Currently, catalogues are restricted to certain countries or particular stone types, but this is not universal. This initial symposium will work towards achieving a directory for those working in the field: contributions will provide an overview by country, region, or stone type, to begin to build an international inventory.

**[92] SYMPOSIUM ■ MESOAMERICA'S FORMATIVE: NEW APPROACHES IN AND OUT OF OLMAN**

Today's scholars of Formative Mesoamerica have not grown impervious to the debates of yesterday, such as issues of cultural origin, influences, and social organization, but have tried to build upon the foundation laid by present and past generations. Creating an awareness of theoretical biases and addressing new frameworks of inquiry, this panel will present the latest trends in the study of Formative Development. Offering varied approaches to a range of topics, papers will include reports on socio-political and economic structures, cross-cultural interactions, and material remains ranging from ceramics to architecture; in and out of the Gulf Coast. The ultimate goal of this panel is to move forward the discussions of Formative development through the evaluation of new discoveries and the reevaluation of pre-existing data.

**[93] SYMPOSIUM ■ WHAT IS NEW IN MESOAMERICAN CAVE ARCHAEOLOGY: THE IMPLICATIONS OF NEW FIELD DISCOVERIES FOR METHOD AND THEORY, PART I**

Driven by a number of large cave focused projects, the pace of discovery in Mesoamerican cave archaeology was extremely high during the previous year. This session seeks to present a forum for the dissemination of this new information. Many discoveries are important because they signal the need to reassess the way we look at our subject matter. In that vein, this session emphasizes not simply the presentation of new data but focuses especially on the implications of these finds for theory and methodology in the field.

**[94] SYMPOSIUM ■ FOOTPRINTS ON THE LANDSCAPE: THE HISTORICAL ECOLOGY OF HUNTER-GATHERERS**

Historical ecology has recently taken center-stage in archaeological research. A key component of this research framework is the idea that humans intentionally and unintentionally modify the landscape to such an extent that these areas can be largely regarded as anthropogenic in character. Often these modifications, or human legacies, have lasting effects on biogeographic systems. Much of this research focuses on large-scale agricultural communities. In this symposium, papers address the degree of landscape transformation by groups following mainly a hunting and gathering and/or limited horticultural economy. Specifically, we confront the idea that such economies have a light or limited impact on the landscape.

**[95] GENERAL SESSION ■ NEAR EASTERN ARCHAEOLOGY**

**[96] GENERAL SESSION ■ ARCHAEOLOGY IN WESTERN EUROPE**

**[97] SYMPOSIUM ■ INVESTIGATING RITUAL AND DOMESTIC SPACES AND PRACTICES AT AN EARLY COLONIAL MISSION IN HIGHLAND PERU**

This session explores the emergence of new ritual and domestic spaces and practices during the initial evangelization of the Andes through analyses of new excavation data from the site of Malata, an Inka provincial settlement and early mission in the Colca Valley of southern Peru. These papers investigate the growth of Malata as a mission and changes in its spatial syntax, including the remodeling of the chapel, Inka imperial structure, plaza, and pathways at the site. Analyses of excavation findings from residential structures of varied form, size, and elaboration in several distinct contexts illustrate differences in their organization and activities.

**[98] GENERAL SESSION ■ ANTHROPOGENIC LANDSCAPES AND ENVIRONMENTAL CHANGE IN THE SOUTHEASTERN UNITED STATES**

**[99] POSTER SESSION ■ MESOAMERICA, CARIBBEAN AND SURVEY METHODS POSTER SESSION**

**[100] POSTER SESSION ■ SOIL GEOCHEMISTRY IN THE MAYA AREA OF MESOAMERICA**

Soil Geochemical analyses are proving useful in determining ancient uses of household activity areas, plaza functions, and agricultural and vegetative histories. Soil Scientists, archaeologists, geographers and others will use the poster format to present current research on geochemical analyses soils from Mesoamerica.

**[101] POSTER SESSION ■ RECENT ARCHAEOLOGICAL RESEARCH IN PRE-COLUMBIAN PACIFIC NICARAGUA**

This poster session presents the preliminary results of recent and ongoing archaeological research projects in Pacific Nicaragua, led by Geoffrey McCafferty, with a focus on Sapoá period (A.D. 800-1250) excavations at the sites of Santa Isabel (2000-2005) and Tepetate (2008) on the Isthmus of Rivas. This is a time period for which ethnohistoric and linguistic evidence has suggested strong interaction with the Mesoamerican world system. Archaeology provides an opportunity to evaluate these hypotheses of long distance economic and cultural exchange.

**[102] GENERAL SESSION ■ PRODUCTION AND EXCHANGE MODELS AMONG THE MAYA****[103] SYMPOSIUM ■ MUST BE TRUE, I SAW IT IN A VIDEO!**

*(SPONSORED BY MEDIA RELATIONS COMMITTEE)*

Video presentations on television and on the Web are popular and often the only sources of information about archaeology and past cultures which attract the public. The stories they tell are accepted as professionally validated solely because they appear on television or on the Web. They are generally accepted without critical evaluation by members of the public or the general archaeological community. This symposium critically examines popular video programs and series found on television and on the Web in order to discover and evaluate the covert and overt messages about archaeology and past cultures found in these presentations.

**[104] SYMPOSIUM ■ TEACHING ETHICS IN ARCHAEOLOGY**

The importance of addressing ethical issues in archaeology is not confined to graduate programs; rather it is intrinsic to many actions and decisions that archaeologists face. Because ethical issues range from professional conduct to how one perceives the protection and conservation of the past, this forum will highlight some of the key areas where the teaching of archaeological ethics should be an imperative such as in museums, or CRM firms, in public outreach projects or academic settings. The RPA will present an award to participating Ethics Bowl teams and general discussion with all members of the profession will be encouraged.

**[105] FORUM ■ WHO'S RIGHT IS MORE RIGHT? CONSULTATION AND RESOURCE PROTECTION IN LAND MANAGEMENT DECISIONS**

*(SPONSORED BY COMMITTEE ON NATIVE AMERICA RELATIONS)*

Land touches many by providing a place to walk, a plant gathering area, a place to live, fresh water and food. The protection of these uses and natural resources while developing the land is a complex juggling act. What is the archaeologist's role within this process? How do landowners/managers weigh the needs of all stakeholders during their management activities? Are archaeological findings unbiased scientific facts or can they be misused? We will explore how multiple histories and stakeholders affect the CEQA or Section 106 process, how varied consultation can be, and how important PR is in handling these complex issues.

**[106] SYMPOSIUM ■ A LIFE IN THE PITT, THE CAREER AND INFLUENCE OF JAMES B. RICHARDSON, III AS SEEN FROM HIS DISCIPLES**

We wish to honor in this session the influence and contributions of James B. Richardson III, professor at the University of Pittsburgh and a long time researcher of the Department of Anthropology at the Carnegie Museum of Natural History. His achievements from pioneering research on the Peruvian North Coast, New England, and Pennsylvania to his advances in the disciplines of maritime and environmental archaeology will be described. His far reaching and global influence in the field will be demonstrated through the presentation of research by his students and colleagues who have benefited from his instruction, mentoring and friendship.

**[107] SYMPOSIUM ■ IDENTITY AND HISTORICAL ARCHAEOLOGY IN AFRICA: ESSENTIAL METHODOLOGIES COMBINING ETHNOARCHAEOLOGY, ORAL TRADITION, AND ORAL HISTORY**

Identity and History in Africa will focus on methodological innovations in African historical archaeology. History is about securing and transforming identity and many societies only recognize oral tradition as a legitimate way of knowing the past. Yet, the politics of nationalism and ethnocentrism continue to create fissures and dichotomies that separate people from their own past and permeate the methods associated with traditional archaeology. The papers in this

session emphasize the importance of incorporating descendant populations in the interpretation of the their past through a dialogue between ethnoarchaeology, oral tradition/history, and archaeology.

[108] SYMPOSIUM ■ **BEYOND EMPIRE: THE LOCAL AND THE MARGINAL IN ARCHAIC STATES**

The relationships among ancient state (or imperial) centers and sites on their margins have often been viewed by archaeologists through the lens of World Systems models and, in particular, core/periphery relations. This focus has tended to highlight the role of the dominant centers and de-emphasize investigations into the development of local power relations within and beyond states' boundaries. In this session we will discuss archaeological data sets, economic and sociopolitical models, and other alternative approaches to the study of the local, the marginal, and the peripheral, and their relationships with associated states and empires.

[109] SYMPOSIUM ■ **CROSSING BOUNDARIES: ROCK ART AND CULTURAL IDENTITY, PART B  
(SPONSORED BY ROCK ART INTEREST GROUP)**

As a highly distinctive and immobile cultural expression, rock art is uniquely suited to studies of past cultural identity. Rock art both defines boundaries and transcends those inferred from other kinds of cultural phenomena. In the American Southeast, and throughout the world, rock art scholars are crossing geographic, cultural, and theory boundaries to explain the complexities of cultural identity.

[110] SYMPOSIUM ■ **Beyond Provenance: Ceramic Petrography and Ceramic Technology  
(SPONSORED BY SOCIETY FOR ARCHAEOLOGICAL SCIENCES)**

Ceramic petrographic analysis is primarily associated with provenance studies. A less documented but potentially valuable avenue is what petrography reveals about technology. Insight into the relationship of fabrics to function informs on relationships of technology, function, tradition and intentionality of potters. Identifications of inclusions informs on tempering strategies and the relationship of potters to their environment. Experimental work and evidence of forming methods are rarely highlighted in publications focused on provenance. This symposium brings together scholars for the opportunity to focus on findings in ceramic technology as identifiable through ceramic petrography. These data are the undocumented promise of ceramic petrography.

[111] SYMPOSIUM ■ **CULTURAL EXPRESSION AND STYLE IN THE HUASTECA**

The ancient Huastec legacy includes an ample body of artifacts and features that reflect local developments alongside the interpretation and adaptation of diverse external influences through time. To better comprehend the complex archaeological cultures of the Huasteca, we must clarify our definitions of "Huastec style(s)" by first situating visual and expressive phenomena in time and space in order to subsequently explore regional and cross cultural contact. We focus on style as the result of historical processes, and thence define how use contexts and understandings of stylistic uniformity and diversity inform our interpretations of the archaeological record in this culture area.

[112] SYMPOSIUM ■ **ACTORS' AND ARTIFACTS' AGENCIES: THE DYNAMICS OF CREATING LIVING OBJECTS**

*(SPONSORED BY ARCHAEOLOGICAL DIVISION OF THE AMERICAN ANTHROPOLOGICAL ASSOCIATION)*  
Recent materiality studies have reconceptualized artifacts as possessing life-essences that influence humans. Precedents in anthropological aesthetics (Robert Armstrong) and the history of art (Henri Focillon) discuss the formal qualities of creations and their basis in dynamic processes of creativity, use, and change as factors that assign artifacts an order of existence. Processes concerning the transformation, translation, or transition between the material and vital-spiritual aspects of artifacts need to be further addressed. A key issue is the dynamic role of artifacts is the transactional or reciprocal nature of the interchange between the object and its maker or user.

[113] SYMPOSIUM ■ **TERRITORIALITY IN ARCHAEOLOGY: THE POLITICS OF LAND AND SPACE**

Archaeologists have tended to assume that social power, particularly within complex polities, has an explicitly territorial dimension - that sovereignty inherently entails the control of land. We often depict political groups from mobile tribes to landed empires as two-dimensional "blobs" on maps. However, recent work in geography and ethnohistory provides numerous examples of polities in which authority is claimed and exerted through alternate modes - e.g., populations, symbolic regimes. We ask why and under what circumstances - economic, environmental, cultural - political domination and resistance are carried out in territorial terms and explore methodologies through which territoriality can be investigated in the archaeological record.



[114] SYMPOSIUM ■ **COMMUNITIES ACROSS SPACE & THROUGH TIME: INVESTIGATIONS IN SOUTHEAST MESOAMERICA**

Community studies bridge the gap between household and region, focusing attention on questions of identity, intra-settlement variations in living arrangements, functions, social formations, and changes through time in these factors. Processes operating at this intermediate level yield insights into shifting cooperative and competitive relations among factions that reflexively shape overarching political structures and domestic arrangements alike. Papers in this session highlight differences and similarities in community form, uses of social memory, factional competitions, and temporal changes in these variables across much of Southeast Mesoamerica. Attention centers on the ways in which broad political processes were refracted through local historical experiences.

[115] SYMPOSIUM ■ **WHAT IS NEW IN MESOAMERICAN CAVE ARCHAEOLOGY: THE IMPLICATIONS OF NEW FIELD DISCOVERIES FOR METHOD AND THEORY, PART II**

Driven by a number of large cave focused projects, the pace of discovery in Mesoamerican cave archaeology was extremely high during the previous year. This session seeks to present a forum for the dissemination of this new information. Many discoveries are important because they signal the need to reassess the way we look at our subject matter. In that vein, this session emphasizes not simply the presentation of new data but focuses especially on the implications of these finds for theory and methodology in the field.

[116] SYMPOSIUM ■ **NAVIGATING TRANSFORMATIONS: SOCIAL COMPLEXITY IN THE NATIVE NORTHEAST**  
Northeast archaeologists have long debated the nature of social complexity among Native peoples before and after European colonization. Most archaeologists assume that Native peoples were egalitarian, at least before the advent of farming. But is the burial ceremonialism beginning in the Archaic Period typical of egalitarian peoples? Did the adoption of maize agriculture have implications for social differentiation? Did social networks change, continue, and/or strengthen in the face of European colonization? Papers will address these and other issues related to social complexity in the Northeast.

[117] SYMPOSIUM ■ **ARCHAEOLOGICAL RESEARCH IN HONDURAS: UNDERSTANDING ANCIENT LIFEWAYS IN THE INTERMEDIATE AREA**

Synthesis of information collected from archaeological sites located in Honduras and portions of the Maya Lowlands is essential to understanding the relationships ancient societies, situated on the eastern periphery of Mesoamerica, established with their contemporaries to the south and west. In this symposium, papers concerning current and past research at sites located in the Intermediate Area are presented in the interest of developing an up to date perspective on internal dynamics and interactions as well as external relationships with political and economic entities located outside the region.

[118] GENERAL SESSION ■ **NORTHWEST COAST ARCHAEOLOGY**

[119] GENERAL SESSION ■ **RECENT RESEARCH IN THE TITICACA BASIN**

[120] FORUM ■ **WHO IS ARCHAEOLOGY'S ACTIVE AUDIENCE?: INSIGHTS AND APPLICATIONS FROM THE NATIONAL SURVEY ON RECREATION AND THE ENVIRONMENT**

*(SPONSORED BY PUBLIC EDUCATION COMMITTEE AND THE PUBLIC ARCHAEOLOGY INTEREST GROUP)*

The National Survey on Recreation and the Environment (NSRE) has been collecting data on American's involvement in outdoor activities—including visiting archaeological sites—for over 50 years. The survey data provides detailed recreation participation, demographic and lifestyle information on archaeology's active and diverse audiences—or "market segments"—that we can use to target select segments of the population in order to help achieve our programmatic goals. The forum panel will discuss how archaeologists and others involved in heritage management, tourism, and cultural resources protection can apply this data to make their public outreach efforts more focused, efficient, and effective.

[121] POSTER SESSION ■ **RECONSTRUCTING CULLE ETHNICITY FROM THE DISCARDED FRAGMENTS OF DAILY LIFE: HOUSEHOLD ARCHAEOLOGY AT CERRO LEON IN THE MOCHE VALLEY, PERU**

From AD 1-200 Cerro Leon and a cluster of nearby residential sites were occupied by immigrants from the adjacent highlands just prior to the formation of the Southern Moche state. Cerro Leon, a massive hilltop town, was the paramount center of an intrusive highland polity in the coca-growing

zone in the middle Moche Valley. These immigrants probably were the ancestors of the Culle-speaking people of the highlands mentioned in historic documents. We present the results five field seasons of household excavations, surface collection, and mapping at Cerro León conducted by the MOCHE-UNC Field School in South American Archaeology.

[122] POSTER SESSION ■ **BETWEEN THE ICE AND THE SEA: REGIONAL INVESTIGATIONS IN BORGARFJORDUR, ICELAND**

In 2008, Brown University initiated a program of regional research in western Iceland that will examine long-term trends in political economy, trajectories of resource use and management, regional integration, and community development from the Viking Age to the recent past. The posters in this symposium examine preliminary archaeological and geophysical results from NSF-sponsored research at three sites - Hals - a small medieval farm, Skogarnes - a massive fuel-extraction site from the Little Ice Age, and Gilsbakki - an interior elite farmstead with deep stratigraphic deposits ranging in age from the medieval period through the 19th century.

[123] POSTER SESSION ■ **NEW DISCUSSIONS ON GREAT MORAVIA**

Recent discoveries at the Great Moravian center of Břeclav-Pohansko and theoretical advances related to the Great Moravian sociopolitical manifestation (ca. 800 to 900 A.D.) are discussed and evaluated. Ongoing collaborative research by Masaryk University-Brno and the College of DuPage yields both refinements and challenges to conventional interpretations of Great Moravian political manifestations and social organization. It is argued that Heterarchy and kin-based, chiefdom structures played a significant role in the formation of the central Great Moravian polity as well as the day-to-day lives of most Great Moravian people.

[124] POSTER SESSION ■ **THE BOVA MARINA ARCHAEOLOGICAL PROJECT: NEW PERSPECTIVES AND RECENT RESULTS**

For the past twelve years a host of international scholars have been conducting fieldwork in Calabria, southern Italy with the Bova Marina Archaeological Project. The contributions of this work include numerous perspectives on the study of landscape (regional pedestrian survey, terrestrial and marine geological survey, archival research of historic land use) and a diachronic program of excavation that includes Neolithic, Bronze Age, Classical Greek, and Medieval periods. Our session brings together this array of work as a means of illustrating the complementary nature of diverse methodologies and the possibilities for integrating multiple research agendas under the umbrella of a single project.

[125] SYMPOSIUM ■ **A PRE-CLOVIS CONTENDER IN NORTH FLORIDA: THE WAKULLA SPRINGS LODGE SITE (8WA329)**

A decade ago, investigations by the late Calvin Jones at the Wakulla Springs Lodge site identified deeply buried Paleoindian components on a high bluff overlooking the springhead. A recent National Geographic Society-funded project was carried out in an effort to further define and date this early phase of human presence. The project recorded artifact-bearing pre-Clovis levels older than had been hypothesized. Employing the Optically Stimulated Luminescence (OSL) method, it also generated early corroborative dates. This session details the Wakulla project and its resulting data and interpretations.

[126] GENERAL SESSION ■ **BUILT ENVIRONMENT**

[127] GENERAL SESSION ■ **ARCHAEOLOGY IN OCEANIA**

[128] GENERAL SESSION ■ **ARCHAEOLOGY OF HUNTER GATHERERS IN THE SOUTHEASTERN UNITED STATES**

[129] GENERAL SESSION ■ **SUBSISTENCE**

[130] POSTER SESSION ■ **SOUTH AMERICA, EUROPE, BIOARCHAEOLOGY, AND CERAMIC ANALYSIS POSTER SESSION**

[131] SYMPOSIUM ■ **OF CRYSTAL BALLS AND POSSIBLE PATHWAYS: VISIONS OF (CO-) FUTURES IN ARCHAEOLOGY**

A decade into the 21st century, American archaeology seems adrift. No leaders exhort us to a given path, no paradigm claims majority allegiance, and scattered factions operate as isolates. While marching lockstep to a pied-piper may not be desirable, a shared sense of purpose might

hold some benefit. In the wake of repatriation, participants in this session consider how we might envision creating "co-futures" with others having vested interests in the past. Developing a vision of co-futures may involve 180o turns from deeply ingrained principles and directions. Themes to be explored include cultural continuity rather than change, survival, stability, and the positive significance of "hybrid" outcomes.

[132] GENERAL SESSION ■ **NORTH AND WEST MEXICO**

[133] GENERAL SESSION ■ **NEW RESEARCH IN QUINTANA ROO, CAMPECHE, AND NW BELIZE**

[134] GENERAL SESSION ■ **DIGITAL DATA**

[135] GENERAL SESSION ■ **OUTREACH AND ARCHAEOLOGICAL EDUCATION**

[136] SYMPOSIUM · **ECONOMY AND POLITY IN ANCIENT SOUTH ASIA: RESEARCH AND PERSPECTIVES**  
Relationships between economic and political organization(s) vary enormously across time and space. As archaeologists seek to identify and understand patterning in this variation, the several millennia of economic and political history encapsulated in the South Asian archaeological record is of theoretical significance well beyond the subcontinent. With the goal of presenting their work to a broad archaeological audience, participants in this symposium are asked to explore how the manufacture, distribution, and consumption of material goods (subsistence, utilitarian, prestige, etc.) condition and are in turn conditioned by the configuration and exercise of social power in their field of inquiry.

[137] FORUM · **IS ARCHAEOLOGY USEFUL?**

Given various pressures, many archaeologists today are concerned to make their practice "useful". The discipline frequently attempts to justify the investment of resources (both public and private) on the grounds that they can offer important insights into a number of arenas deemed significant - sustainable development, inter-ethnic relations, minority rights, etc. However, others take the view that the presumed social value of such actions in the contemporary world can be more efficiently and effectively accomplished by other fields. A defense of archaeology's usefulness often turns to its special contribution either as critique, practical action, knowledge production or some combination of all three. However, dissenting voices argue that "utility" is a poor measure of valuation. Additionally, an increasing number of outsider voices challenge the authority of archaeology altogether in favor of alternative interpretations of the past. In what ways does this threaten archaeology's claim to value participation in and support for free intellectual enquiry as a societal good in itself? Along these lines the forum seeks to address a number of interrelated questions: 1. How important is the criterion of "usefulness" in establishing the value of our discipline? To whom do we need to justify ourselves? 2. In what ways can or should archaeology be useful to society? Is there an ideal balance between critique and action, and should we even distinguish between the two? 3. Does it really matter what we do? If it does, then for whom? 4. What are the dangers, the intended and unintended consequences of archaeology? This forum, sponsored by the journal *Archaeological Dialogues* (CUP), will take the form of a keynote address that was pre-circulated to a panel of 5-6 commentators. The address and comments will then be followed by an open discussion with those in attendance. Abstract of Dr. Dawdy's Keynote follows: "Millennial Archaeology: Locating the Discipline in the Age of Insecurity" We have arrived at our own fin de siècle moment, a computer-driven version of that European intellectual movement dating between 1880 and 1914 characterized by a mixture of decadence and dread on the cusp of major change. Appropriate to the scale of a millennium rather than a century, the global mood today seems exponentially deeper than it did a century ago, with millennial preoccupations stemming from 9/11, global warming, disasters, new wars of religion, food shortages, and growing neoliberal inequalities. Archaeology can't help but be affected by world events and cultural shifts. Asking the question "Is Archaeology Useful?" reflects an anxiety about whether it is decadent to entertain studies of the obscure past when the future feels so fragile. It also reflects an anxiety that a discipline rooted in colonial and nationalist practices may have no place in a post-colonial, globalized world. Since the turn of the last century, archaeology has made several attempts to "be useful" to contemporary society -- from V. Gordon Childe's marxism to the disastrous nationalism of Kossinna. More recent examples include revisionist archaeologies of the African diaspora and the explosion in "public archaeology," which covers everything from eco-tourism to contract archaeology and public education. Are these efforts truly new in spirit, or useful in effect? Can archaeology be safely and effectively applied to reinventing the future?

[138] SYMPOSIUM ■ **CULTURAL, BIOLOGICAL AND ENVIRONMENTAL CONTINUITY AND CHANGE IN LATE PREHISTORIC (5000-1000 BC) PORTUGAL: INTERDISCIPLINARY APPROACHES TO SETTLEMENT AND BURIAL ARCHAEOLOGY IN THE SIZANDRO-ALCABRICHEL RIVER VALLEYS, PORTUGAL**

This session focuses on the current state of late prehistoric (5000-1000 BC) archaeological research in the Sizandro-Alcabrichel river valleys in the Estremadura region of Portugal, and emphasizes the value that interdisciplinary approaches can have in providing a more holistic understanding of lifeways and deathways and environmental fluctuations throughout this dynamic and formative period of Iberian history (the Neolithic through the Bronze Age). Although this region has been the subject of long and intensive archaeological research for much of the 20th century, few synthetic examinations of the interplay of cultural, biological, and environmental dynamics exist.

[139] GENERAL SESSION ■ **RECENT RESEARCH IN SOUTH AMERICA**

[140] SYMPOSIUM ■ **PLANTATIONS, FARMS, AND FRONTIERS: HISTORICAL ARCHAEOLOGICAL APPROACHES**

Frontiers are metaphorical edges linking present to future or separating known from unknown. Anthropologists and historians conceptualize frontiers as permeable boundaries at peripheries of capitalist systems where, often violently but always creatively, interactions of cultural "others" result in new cultural expressions. While New World authorities encouraged the growth of stable plantations and farms to replace fluid frontier situations, within these settings change was ongoing. The authors in this session discuss methodological and theoretical approaches for considering the dynamic processes at work in frontier agricultural outposts and established plantations where residents interacted on the boundaries of socio-cultural, technological, and environmental transformation.

[141] SYMPOSIUM ■ **ICONOCLASH AND THE ARCHAEOLOGY OF VIOLENCE TOWARD IMAGES (SPONSORED BY COLUMBIA CENTER FOR ARCHAEOLOGY (COLUMBIA UNIVERSITY, NEW YORK))**

This session builds on the work of Bruno Latour and colleagues to expand our theoretical understanding of iconoclasm and representational ambivalence beyond its traditionally unique association with the religions of the Book. Our claim is that the tension between iconophobia and iconophilia, between the destruction and the creation of images is a universal aspect of the human experience. Hence, the study of why past peoples periodically rejected or did violence unto images (why they broke figurines, burned temples, defaced pictures and the like) is the necessary compliment to the study of why they made these images in the first place.

[142] GENERAL SESSION ■ **SUBSISTENCE AND DOMESTIC ECONOMY IN THE SOUTHEASTERN UNITED STATES**

[143] SYMPOSIUM ■ **COMMUNITIES IN TIME**

Communities (broadly defined) of people exist in a temporal context that includes dynamic environmental and social conditions. The archaeological community has amassed enough good dates and good data to explore the causes and consequences of change/stasis, continuity/discontinuity, re-use/abandonment, growth/collapse, and so on within a single group of people over time. Although much archaeological research necessarily focuses on a single methodology or topic, many regions have undergone intensive study by a variety of specialists over the years and a local synthesis of data is possible. This session samples the current state of local syntheses of archaeological research around the world.

[144] SYMPOSIUM ■ **EAST OF EDEN AND NORTH OF CHACO: UNTANGLING EARLY PUEBLOAN, CHACOAN, AND NAVAJO HISTORIES IN THE UPPER AND MIDDLE SAN JUAN DRAINAGE**

Several large research programs have recently examined the area between the La Plata and Upper San Juan River drainages, in northwestern New Mexico and southwestern Colorado. Farming societies occupied this region at a various times from Basketmaker II through the Post-Pueblo period. Long considered a periphery to the Mesa Verde and Chaco regions, this area has taken on new importance as researchers have recognized its potentially pivotal role in the histories of the other two. It is at the center of early Basketmaker and Puebloan developments, as well as the emergence of post-Chacoan and Navajo cultures.

[145] POSTER SESSION ■ **OLD WORLD, ARCTIC, AND OCEANIA POSTER SESSION**

[146] POSTER SESSION ■ **ARCHAEOLOGY AND THE INTERNATIONAL POLAR YEAR: WHAT HAVE WE LEARNED ABOUT THE HISTORY AND PREHISTORY OF THE CIRCUMPOLAR NORTH, AND WHERE DO WE GO FROM HERE?**

This year marks the final season of archaeological and interdisciplinary activities related to the third International Polar Year (IPY), and 125 years since the first of such endeavors. A broad range of international archaeological projects formed a significant part of IPY activities, addressing such issues as climate change impacts, human-animal relations, social interactions, migrations, ethnic identities, and the relationship between history and modern peoples. This archaeology IPY symposium will offer the opportunity to present the results culminating from two years of international research, and also provide for a discussion of future directions in circumpolar archaeology.

[147] Poster Session ■ **LANDSCAPE ARCHAEOLOGY IN OCEANIA: RECENT APPLICATIONS AND METHODOLOGICAL ADVANCES**

As a unifying concept, landscape archaeology provides a forum for the presentation of methodological techniques including recent applications and advances in geo-spatial analysis, remote sensing, digital imagery analysis, GIS model development, agent based simulations, and other computer based applications. This session is intended to highlight recent methodological applications and advances of landscape approaches within the Oceanic region. Poster presentations offer a great opportunity to focus on compelling visual data generated through GIS and spatial analysis which are often understated in oral presentation format.

[148] SYMPOSIUM ■ **RECENT RESEARCH ON OLMEC AND EPI-OLMEC POLITICAL ECONOMY AT TRES ZAPOTES, VERACRUZ, MEXICO**

This symposium reports the results of the most extensive program of archaeological research at Tres Zapotes, Veracruz since Stirling's 1939-1940 Smithsonian investigations. Participants present new data from geophysical survey, auger testing, and excavations in civic-ceremonial, domestic, craft production, and mortuary contexts at Tres Zapotes as well as settlement survey around El Meson, its political subordinate and successor. The data document the Early Formative founding of Tres Zapotes, its subsequent emergence as a regional Olmec capital, and the development of a ruling confederation and a less exclusionary political economy in the face of Late Formative period factional competition.

[149] SYMPOSIUM ■ **UNDERSTANDING COMPLEXITY IN MESOAMERICA: PAPERS IN HONOR OF ROBERT SHARER, PART I**

For over four decades, Robert J. Sharer has made central contributions to our understanding of ancient Mesoamerica. The participants in this session illuminate his legacy through original research papers that tap the diverse empirical, interpretive, and theoretical contributions that Sharer has made to address topics and debates that include current issues and enduring questions. The papers address themes relating specifically to understanding the development and maintenance of complexity and interregional interaction in ancient Mesoamerica.

[150] GENERAL SESSION ■ **PEOPLE, ANIMALS AND ENVIRONMENT IN THE CARIBBEAN**

[151] GENERAL SESSION ■ **RECENT APPROACHES TO SOCIAL COMPLEXITY IN THE ANDES**

[152] GENERAL SESSION ■ **MIDWEST AND GREAT LAKES II**

[153] SYMPOSIUM ■ **LATE AND TERMINAL ARCHAIC DISCOVERIES IN THE NORTHEAST**

While Late and Terminal Archaic Period sites are well represented in the archaeological record of the Northeast, local researchers still grapple with how they articulate regarding broader issues of settlement, subsistence, technology, and ideology. This symposium presents an opportunity to disseminate new primary data, in addition to revisiting older data sets from a more informed perspective. Most importantly, it is intended to revitalize interest among those who have cultivated an enduring fascination with the cultures of Late and Terminal Archaic Period peoples, and perhaps even attract new researchers to this area of interest.

[154] SYMPOSIUM ■ **TOWN AND COUNTRY IN THE BOLONCHEN DISTRICT OF THE PUUC HILLS, YUCATAN: INVESTIGATING THE RURAL-URBAN CONTINUUM**

Over the past nine years, the Bolonchen Regional Archaeological Project has studied the chronology, human ecology, and social organization of three Puuc centers - Kiuc, Huntichmul, and Labna - and their hinterlands. Mapping, transect survey, and excavation programs reveal that

these three centers were focal points of settlement and power similar to city-states observed in other parts of the ancient world. At the same time, our data allow a critical examination of the "ruralization" (sensu Yoffee 1995) associated with these politico-territorial units. In this region of the Maya lowlands, a commingling of urban and rural features can be observed.

[155] GENERAL SESSION ■ **ARCHAEOLOGICAL SURVEY TECHNIQUES**

[156] GENERAL SESSION ■ **ARCHAEOLOGY IN ASIA**

[157] GENERAL SESSION ■ **CRM**

[158] SYMPOSIUM ■ **WETLANDS AND ARCHAEOLOGY IN NORTHERN BELIZE AND BEYOND**

Wetlands provide a nexus for natural science and social science research reconstructing past environments. They provide an ideal laboratory to study the intersection of human responses to and impacts on the environment. This symposium provides a view of the multiple lines of evidence and the multidisciplinary perspectives that together contribute to our understanding of global and environmental change, including human interactions, in the wetlands of northern Belize and beyond.

[159] FORUM ■ **TEACHING LAW IN ARCHAEOLOGY: PERSPECTIVES FROM THE FIELD**

*(SPONSORED BY HERITAGE VALUES INTEREST GROUP)*

As the law holds increasing significance for the discipline and practice of archaeology, the teaching of law in the curriculum is expanding. This session reflects on the role of law within the discourse of archaeology. How is it taught? Who teaches it? Where is it categorized within institutional frameworks? What does the future hold? In addressing these questions, and others, this session draws upon the experience and expertise of lawyers, law professors, and archaeologists who teach law to archaeologists at both the undergraduate and graduate levels in archaeology and anthropology departments and in law schools in the US and abroad.

[160] SYMPOSIUM ■ **REDEFINING THE BOUNDS OF CONSULTATION: THE FORT A.P. HILL ALTERNATE MITIGATION PROGRAM AS AN EXAMPLE OF A UNITED STATES ARMY REGIONAL CONSERVATION APPROACH**

In 1941, the creation of Camp A.P. Hill, in Caroline and Essex counties, Virginia, redrew political borders, eliminating dozens of established communities. Today, urban sprawl and development threaten significant, off-installation, resources in the vicinity of the military reservation. The Fort A.P. Hill Alternate Mitigation Program is a regional approach to cultural resource management which mitigates adverse effects to on-installation Civil War-era sites and nineteenth-century farmsteads through consultation, cooperative research, and off-installation conservation easements on seventeenth-century, American Indian resources. Through existing, and developing, regional environmental partnerships, the Army hopes to ensure responsible conservation on the installation and in the surrounding environs.

[161] SYMPOSIUM ■ **EVOLUTIONARY DYNAMICS OF COOPERATION**

Archaeologists have almost completely ignored bottom-up possibilities for achieving group cooperation and cohesion in favor of political models emphasizing how top-down leadership might appear and thrive. Yet the evidence is increasingly strong that humans have evolved capacities for cooperative behaviors employing a number of mechanisms applicable at increasingly broad social and spatial scales (e.g., kin favoritism, direct and indirect reciprocity, social norms, and ethnic marking). In this symposium we examine how these mechanisms might be brought to bear to explain archaeological phenomena, either singly, in combination, or in the context of top-down leadership.

[162] SYMPOSIUM ■ **END OF THE GOLDEN AGE? FIELD SCHOOLS AND THE FUTURE OF ARCHAEOLOGY**

Recently, Brian Fagan suggested that archaeology is failing at creating the next generation of public support for the discipline. As archaeology is becoming ever more specialized and complex, interest of lay audiences is rapidly declining. Is archaeology losing its appeal? The emergent popularity of field schools may assist in stopping, possibly reversing, this trend. This session will explore the advantages, hazards and benefits quality field schools may have for archaeology. Using the recently established UCLA Field Program, speakers will explore its vision, impact and success at both exposing archaeology to a wider audience and providing significant and stable financial support for quality field research.

[163] GENERAL SESSION ■ **HISTORICAL ARCHAEOLOGY**

[164] GENERAL SESSION ■ **ANCESTRAL PUEBLO ARCHAEOLOGY: NEW STUDIES FROM THE MESA VERDE, LITTLE COLORADO, MOGOLLON, AND MIMBRES AREAS**

[165] SYMPOSIUM ■ **LARGE COASTAL SHELL MOUNDS: WORLDWIDE PERSPECTIVES**

Research on large coastal shell mounds has experienced a revival in the last decade due to renewed interest in coastal adaptations and related studies on economic intensification and complex hunter-gatherers. Regional and diverse research programs from around the world will be reviewed and compared with the aim at exploring the possibility of common variables playing an important role in the formation of these large coastal sites. Topics such as chronologies and timing within local cultural sequences, geographic distribution, possible paleoenvironmental factors in their formation, subsistence strategies and demography, site function and spatial arrangement of sites, will be discussed among others.

[166] SYMPOSIUM ■ **Breaking and Entering the Aztec World: Papers in Honor of Liz Brumfiel**

Elizabeth Brumfiel has been at the forefront in applying social theory to Aztec archaeology and history, beginning with her research at Huexotla in the 1970's in which she challenged models of Aztec city-state development, and with posterior research in Xico and Xaltocan. She has also been a pioneer in the archaeology of gender, archaeological studies of Aztec ideology, craft production, and factionalism, among others. This symposium brings together leading specialists and promising new scholars to explore current directions in Aztec studies and assess Brumfiel's influence and contributions to Aztec archaeology and beyond.

[167] SYMPOSIUM ■ **LANDSCAPE NEOLITHIZATION ALONG EAST ASIAN INLAND SEAS**

Archaeologists in East Asia have identified distinctive trajectories of long-term culture change. The region enjoys a rich material record, including the world's oldest pottery (ca. 16,000 CALYBP), evidence of unique hunter-gatherer adaptations, early plant cultivation and corresponding agricultural dispersals. These innovations played a key role in generating new forms of cultural landscapes. In this symposium, regional specialists examine how these natural and cultural landscapes were transformed physically and ideologically as fisher-hunter-gatherers developed new social systems during the "Neolithization" of littoral East Asia. The papers will explore the active role of ideology and human agency in the transformations of these cultural landscapes.

[168] SYMPOSIUM ■ **PROVENANCE STUDIES IN ARCHAEOLOGY**

*(SPONSORED BY SOCIETY FOR ARCHAEOLOGICAL SCIENCES AND THE INTERNATIONAL ASSOCIATION FOR OBSIDIAN STUDIES)*

Archaeologists have used a number of geochemical techniques to obtain provenance information to develop and refine models for, human migration, local exchange networks, and large-scale trade structures. Techniques have been developed to analyze a variety of archaeological material such as obsidian, turquoise, quartz, and ceramics as well as studies in human migration. New instrumentation is less destructive, more precise and requires less material for analysis. Therefore, isotopic analysis and other geochemical techniques are increasingly being utilized to source archaeological materials. This session will bring together researcher who have applied or developed provenance techniques.

[169] SYMPOSIUM ■ **UNDERSTANDING MAYA CIVILIZATION: PAPERS IN HONOR OF ROBERT SHARER, PART II**

For over four decades, Robert J. Sharer has made central contributions to our understanding of Maya civilization. The participants in this session illuminate his legacy through original research papers that tap the diverse empirical, interpretive, and theoretical contributions that Sharer has made to address topics and debates on current issues and enduring questions. The papers address themes drawn from Maya archaeology and related studies of Maya society past and present.

[170] SYMPOSIUM ■ **THREE DECADES OF THE SICÁN ARCHAEOLOGICAL PROJECT: SYNTHESIS AND EVALUATION**

Up until the mid-1970s, the extensive Lambayeque region of the north coast of Peru was perceived as marginal to the presumed cultural core area of the Moche valley to the south and given scant archaeological attention. The subsequent thirty years of nearly continuous investigation into the Sicán and broader Lambayeque prehistory by the Sicán Archaeological Project have helped transform the above perception. This symposium synthesizes the Project's

approaches and accomplishments thus far in regard to a holistic understanding of the Sicán culture and Lambayeque regional prehistory, and lastly, and critically assesses the impact upon Andean archaeology and prehistory.

[171] SYMPOSIUM ■ **NATIVE AND IMPERIAL MORPHOGENESIS: COMPARING 16TH CENTURY ENTRADAS IN THE AMERICAN SOUTHWEST AND SOUTHEAST**

The earliest Spanish expeditions into the American Southwest and Southeast set in motion cultural transformations with profound and lasting implications – both for Native communities in the western hemisphere and for European imperial powers in the east. As a wealth of documentary, ethnohistorical, archaeological and other information has accumulated in recent years, new opportunities have emerged to compare systematically the impacts of these important events in two major regions of the Spanish Empire. By tracing similar themes in both geographic areas, this session seeks to illuminate patterns of cultural interaction, transformation and continuity during the initial period of Native-European contact.

[172] SYMPOSIUM ■ **RECENT RESEARCH IN SOUTH-CENTRAL PUERTO RICO**

Recently, several teams have undertaken interesting archaeological research in the Portugues River valley in south-central Puerto Rico, to complement past and on-going research at the Tibes. Survey/testing, innovative zooarchaeological sampling, social memory research, and data recovery excavations have been undertaken in the past two years. Extensive excavations at PO-29 resulted in important and spectacular discoveries, yet that study is only one part of a regional approach to better understanding the past of the Portugues River valley. The PO-29 project also brought into focus several major issues in Puerto Rican archaeology, and this symposium includes a critique of the project.

[173] SYMPOSIUM ■ **INDIGENOUS MATERIALITIES AND ARCHAEOLOGICAL ANALYSIS IN THE EASTERN WOODLANDS**

In the Eastern Woodlands and elsewhere, archaeological theory and practice have become more respectful of Indigenous voices, a development less visible in archaeological analysis. This session asks two questions: 1) How do archaeologists determine the logics under which archaeological data were generated? 2) How does praxis (need to) change when archaeologists take such logics to heart? Participants address these questions in terms of the standard axes of archaeological analysis (architectural, ceramic, flora, etc) in the Native History of the Eastern Woodlands. The answers should be interesting for other regions, where archaeologists and their data may have different materialities and expressions.

[174] POSTER SESSION ■ **METHODS POSTER SESSION**

[175] POSTER SESSION ■ **GEOARCHAEOLOGY INTEREST GROUP POSTER SESSION: GEOARCHAEOLOGY AND INTERPRETATION**

*(SPONSORED BY GEOARCHAEOLOGY INTEREST GROUP)*

This poster session provides a forum to explore the explanative power of geoarchaeological approaches to archaeological interpretation. Geoarchaeologists provide alternative models for understanding the subtleties of the archaeological record and the processes that formed it. Our research often challenges field assumptions, provides spatial and temporal context to artifact specialists and addresses long-standing questions about site formation. These posters demonstrate significant contributions earth science specialists make to understanding the past through field, lab and analytical methods. The session aims to reach a wide archaeological audience by presenting both methodological as well as theoretical advancements provided by a geoarchaeological framework.

[176] POSTER SESSION ■ **SCIENCE IN SUPPORT OF ARCHAEOLOGY**

Advances in technology continue to expand our ability to interpret the past. Environmental and other sciences are essential to understanding the archaeological record. For instance, AMS radiocarbon dating now has a boost through identification of the charcoal being dated. Global warming has brought to the fore our "need to know" about the past environment and what changes influenced people's settlement patterns. Pollen and phytolith analyses are two that contribute heavily to this area. Identifying foods relies upon a collection of sciences such as pollen, starch, phytolith, macrofloral, and protein and organic residue analysis.

[177] SYMPOSIUM ■ **VIOLENCE AND WARFARE AS EMBODIED ACTION**

Analysis of the situated body provides an important avenue for evoking subjectivities surrounding violence, structural violence and armed conflict. These forms of struggle may be socialized



through the lived experience of the individual body, through representations of the body, and through regulation of the body. Archaeological approaches toward these forms of embodiment can highlight the historical processes that serve to institutionalize and even valorize physical expressions of oppression, injury, and battle. Papers in the session will be asked to explicitly relate theories of embodiment with both literal and implied signatures of structural violence and conflict.

[178] GENERAL SESSION ■ **ETHNOARCHAEOLOGY**

[179] GENERAL SESSION ■ **HUNTER-GATHERERS AND TECHNOLOGY**

[180] GENERAL SESSION ■ **SOUTHWEST ARCHAEOLOGY: NEW STUDIES FROM THE SINAGUA AND ADJACENT REGIONS**

[181] GENERAL SESSION ■ **NEW RESEARCH ON TEOTIHUACAN**

[182] GENERAL SESSION ■ **ZOOARCHAEOLOGICAL STUDIES IN THE MAYA AREA**

[183] GENERAL SESSION ■ **NEW DIRECTIONS IN CERAMIC STUDIES**

[184] GENERAL SESSION ■ **PALEOLITHIC TECHNOLOGIES AND LANDSCAPES**

[185] GENERAL SESSION ■ **SOCIAL INTEGRATION AND DOMESTIC ORGANIZATION AMONG THE CLASSIC MAYA**

[186] FORUM ■ **OF GLOBAL SIGNIFICANCE: SEEKING INSCRIPTION ON THE WORLD HERITAGE LIST**

In October 2006, the National Park Service Office of International Affairs began accepting applications for the new U.S. World Heritage Tentative List, a list of American cultural, natural and mixed properties that are potential future candidates for the World Heritage List. Of the 14 properties on the new Tentative List, three are archaeological and a fourth has archaeological components. This forum brings together people preparing World Heritage nominations on behalf of candidate properties, people with insight into the nomination process and the characteristics of a successful nomination, and people who manage sites already inscribed on the World Heritage List.

[187] SYMPOSIUM ■ **EARLY WRITING AND AGENCY: EPIGRAPHY AND AGENTS IN THE ARCHAEOLOGICAL RECORD**

In recent years, archaeologists have incorporated the concept of "agency" in various guises. This situation may indicate some confusion as to what agency "is," or should be. The aim of this symposium is to illustrate how a text-based perspective can clarify some of the problems and possibilities of using agency in archaeology. Papers will approach early writing systems through the theoretical lens of agency, allowing for the identification and discussion of observable actors in the archaeological record. This approach will help distinguish between intentions, consequences, meanings, and motivations, thus increasing understanding of historically particular subjectivities of past social actors.

[188] SYMPOSIUM ■ **THE REAL WORLD: TEACHING ARCHAEOLOGY IN NON-TRADITIONAL WAYS AND PLACES**

Archaeologists increasingly find themselves working in non-traditional settings with a range of audiences. Teaching and learning today extend well beyond the four walls of the classroom. As such, there is a need to create and develop new and different approaches to teaching and understanding the past. One of the major challenges in presenting archaeology in an attractive and understandable manner to a lay population is maintaining the integrity of the subject matter. This session will present a discussion of some of the problems and the solutions involved in moving an understanding of the past out and beyond a traditional classroom.

[189] GENERAL SESSION ■ **SOUTHWEST ARCHAEOLOGY: ADVANCES IN METHOD AND THEORY**

[190] GENERAL SESSION ■ **NEW FINDINGS ON THE FIRST AMERICANS**

[191] SYMPOSIUM ■ **DOMINATION AND RESISTANCE ON AN INKA FRONTIER: A CASE-STUDY BY THE PAMBAMARCA ARCHAEOLOGY PROJECT IN NORTHERN ECUADOR**

The colonization of northern Andean Ecuador was most difficult for the Inka. According to the chronicles, an intense resistance took place over many years and the largest concentration of fortresses in the New World was constructed at Pambamarca. Despite heroics, upon defeat many

in the Pais Caranqui were sacrificed. These papers address the archaeology behind these stories by moving toward a discussion of the nature of invasion, colonization and resistance among pre-Columbian cultures. A central theme will be the interpretive power and capability of the chronicles to enhance or hinder our interpretation of culture-historical processes.

[192] SYMPOSIUM ■ **RECENT ADVANCES IN PRECLASSIC LOWLAND MAYA ARCHAEOLOGY**

Recent research has shown the Preclassic Maya to have a rich and varied culture found throughout the Northern and Southern Lowlands. Stunning examples of Preclassic artistic traditions have been found in the Southern Lowlands along with impressive monumental architecture. In Belize, the Maya occupation has been found to be older and more diverse than expected, and in the northern lowlands, where the map was once nearly blank, Preclassic Maya sites now abound. This complex and burgeoning occupation warrants a reconsideration of the Preclassic Maya and their role in larger Preclassic Mesoamerica.

### ABSTRACTS OF INDIVIDUAL PRESENTATIONS

**Abbott, David [110]** *see Kelly, Sophia E.*

**Abella, Adrian (CSU Long Beach) and Hector Neff**

[58] *Innovative Analytical Techniques in Coastal Guatemalan Archaeology*

By using a Laser Ablation ICP-MS (LA-ICP-MS) to chemically analyze plumbate pottery excavated in La Blanca, Guatemala, I will ascertain their source by comparing the chemical composition to raw clay samples from neighboring areas that had possible interactions with the site in question.

**Aben, Kathrina (Howard University)**

[33] *Comparison of Artifact Collections, Hermosa, New Mexico*

All that is left of the original town of Hermosa today is a hotel and a log cabin. There are also a few ranch buildings added between the 1930s and the 1960s. The area surrounding Hermosa Ranch, however, yielded a plethora of artifacts that span all periods of occupation. One dense location, found overlooking the creek behind the 1930s kitchen building, was assessed by surface collection. Another, found to the east of the hotel building, was evaluated by shovel tests. The presentation finds links between the two locations, determining similarities and differences between artifact time period, characteristics, and distribution.

**Abraham, Sarah (University of California)**

[151] *Imperial Architecture and Control in the Provinces: A Study of Mixed Inca-Local Sites in Southern Ayacucho*

During the Late Horizon, the Inca empire spread over western South America, incorporating numerous cultural groups into its state. Control over these populations was facilitated by constructing new provincial sites and co-opting existing ones, creating mixed Inca-local settlements. These sites demonstrate great variation in architectural style, planning, and layout, often in correlation with the settlements' relationship with the empire. This paper examines settlements of the Lucanas, Andamarca Lucanas, and other provincial groups in the southern highlands of Ayacucho to assess the architectural diversity of Inca-local settlements and how it relates to this region's place within the imperial sociopolitical hierarchy.

[151] *First Chair*

**Abraham, Shinu (St. Lawrence University) and Uzma Z. Rizvi (Stanford University)**

[21] *Interaction and Domains in South Asia and the Old World: Papers in Honor of Gregory L. Possehl*

This paper will introduce and contextualize the work of Gregory L. Possehl in the areas of interaction and domains. His original research, compilation and synthesis of separate site reports and notations lead to broader understanding of the Indus Civilization and interaction across South, Central, and West Asia. Possehl's concept of domains explains both variation and coherence in material culture across the Indus. His model of third millennium Middle Asian Interaction Sphere (MAIS) is supported by evidence at multiple sites. This paper provides an overview of contemporary research influenced by Possehl's work ranging from ceramic comparisons to pastoralism to paleoanthropology.

[21] *First Chair*

**Abrams, Elliot (OHIO U) and AnnCorinne Freter (Ohio U)**

[152] *The Homestead Model of Early/Middle Woodland Settlement: A Landscape Approach from SE Ohio*

There are various models of community sedentism for Woodland societies of southern Ohio. These models range from considerable seasonal and annual community movement to those of domestic permanence. Here we offer the "homestead model" of settlement guided by the principle that communities were flexible and opportunistic in their movements but reoccupied an increasingly restricted domestic space. By the Woodland period, each community's residences were limited to a specific set of landforms that defined that community's homestead. Data to support this model are drawn from domestic sites and GIS analyses in the Hocking Valley, southeastern Ohio.

**Ackerman, Robert E. [145]** *see Endacott, Neal*

**Acotley, Shannon [43]** *see Pye, Jeremy W.*

**Adams, Christopher [171]** *see Mathers, Clay*

**Adcock, Sarah (Baylor University) and Benjamin Arbuckle (Baylor University)**

[145] *The Origins of Metallurgy in Central Turkey: Distinguishing Stone from Metal Cutmarks on Animal Bones*

This poster presents the first results of a project focused on identifying the origins of metallurgy in central Turkey through the analysis of cutmarks on butchered animal bones. Using the results of actualistic studies by Greenfield (1999; 2004), we attempt to use the morphology of cutmarks to determine whether butchery was carried out using stone or metal tools and then to quantify changes in the frequency of stone versus metal tools from the Neolithic through the Iron Age at the sites of Kosk Hoyuk and Cadir Hoyuk.

**Adelsberger, Katherine [184]** *see Smith, Jennifer R.*

**Adovasio, James (Mercyhurst Archaeological Institute) and C. Andrew Hemmings (University of Texas)**

[190] *Inner Continental Shelf Archaeology in the Northeast Gulf of Mexico*

Recent NOAA-funded investigations for submerged Pleistocene landforms and inundated archaeological sites in the Northeastern Gulf of Mexico focused on three areas spanning the period from the Last Glacial Maximum, circa 20,000 years ago, until just after the Clovis occupation of this hemisphere, circa 12,000 years ago. Using side scan sonar, a sub-bottom profiler, and an ROV, relict and intact terrestrial, riverine and coastal features were identified. Several hundred loci were documented that include more than 100 infilled sinkholes and/or lagoonal features on the Inner Continental Shelf. In 2009, selected sites will be visited and sampled by divers.

[30] *Discussant*

**Adovasio, James [190]** *see Carr, Kurt W.*; [89] *see Halligan, Jessi J.*; [89] *see Hemmings, C. Andrew*

**Adriano-Morán, Cristina [166]** *see McClung de Tapia, Emily S.*

**Afonso, Marisa [165]** *see Gaspar, Maria Dulce*

**Aguirre, Alejandra [38]** *see Chávez Balderas, Ximena M.*

**Agurcia Fasquelle, Ricardo (Asociacion Copan)**

[169] *On the Road to Copan and the Tunnel to Quirigoey*

This paper traces the significant path that Robert Sharer and his students have cut through the archaeology of Honduras. Starting in the mid-seventies, a number of very important projects that cover a large expanse of the Honduran territory have been impacted by this scholar. Highlights of these will be presented as well as their theoretical and methodological significance in deciphering the complex precolumbian past of this small nation.

**Ahlman, Todd (Historical Research Associates, Inc.) and Bobby Braly (University of Tennessee)**

[99] *The Cultural Landscape of St. Kitts' Southeast Peninsula: Making a Living on the "Fertile Island's" Desert*

St. Kitts landscape, like much of the Caribbean, is dominated by remnants of a once wealthy and

vibrant, but yet, oppressive sugar culture. Planters and yeoman farmers on St. Kitts' southeast peninsula attempted to gain a share of this wealth on what is little more than a desert on the lush, tropical isle. Using historical maps and archaeological data, the cultural landscape of the southeast peninsula is recreated to show how attempts were made to plant sugar and cotton as well as support a community of planters, overseers, enslaved Africans, and freedman.

**Ahlman, Todd [99]** *see Schroedl, Gerald F.*

**Aimers, Jim (SUNY Geneseo) and Gyles Iannone (Trent University)**

[83] *Introduction: The Dynamics of Ancient Maya Developmental History*

After over a century of archaeological research a coherent overview of Maya culture history is still elusive. In some areas and periods major chronological problems remain unresolved, and even in cases where chronology is clearer, great variability is seen among sites. These issues are relevant to recent discussions of at least four major collapse-like events in the Maya area and their relationship to drought. Here we review the dynamics of ancient Maya developmental history in relation to these hypotheses. We argue that multiple cycles of integration and disintegration in the ancient Maya world problematize simplistic explanations of Maya "collapse."

**Aimers, Jim [185]** *see Awe, Jaime J.*

**Aivulasit, Michael [175]** *see Thieme, Donald M.*

**Akoshima, Kaoru (Tohoku University)**

[77] *Lithic microwear analysis toward a more integral approach to function and technology as "micro-traceology"*

Lithic microwear analysis has been generally considered as a technique for functional determination. Controlled experiments with replicated tools provided interpretative criteria since 1970s. The paper proposes a new methodological renovation to incorporate microscopic traces other than use wear into holistic approach of "micro-traceology". The strategy aims at analyzing all stages of lifecycle of tools in organized technology, from production to discard. Case studies from Japanese prehistory, such as particular types of scrapers and rice reaping knives are discussed. The Tohoku University program provides fundamental data for the new approach especially for identification of microwear polishes.

**Akyuz, Linda**

[180] *Ceramics of the Honanki Pueblo*

Sherds that have been excavated from rooms at the Honanki Pueblo reflect ceramic traditions of the region. Excavations have revealed patterns of manufacture that employ local materials and regional traditions, along with some evidence of trade. Ceramic processes and their physical manifestations are emphasized.

**Alcock, Susan [108]** *see Cherry, John*

**Alconini, Sonia (University of Texas At San Antonio)**

[113] *The Inkas: Political Control, Power and Colonization Strategies in the Southern Provinces*

The evolution of two Inka provinces will be compared to understand Inka strategies of control. The first, Oroncota, nearby the Southeastern frontier, displayed the investment of fine architecture of power, even though domination did not involve significant effects on the local socioeconomy or the actual presence of colonies. In the second, Charazani, the empire did not only establish colonies from nearby Inkanized provinces, but also promoted the influx of imperial materials. Therefore, these two examples highlight the role of portable and non-portable media in the materialization of power, and the effects of varying colonization strategies in the makeup of empires.

**Aldenderfer, Mark [30]** *see Haas, Wm. Randall;* [119] *see Craig, Nathan*

**Alex, Bridget (Dartmouth College), Deborah Nichols (Dartmouth College) and Michael D. Glascock (University of Missouri Research Reactor (MURR))**

[99] *Discerning short-distance exchange: chemical variability in Formative Period ceramics from Teotihuacan Valley*

Early regional exchange in the Teotihuacan Valley was investigated by characterizing pottery from four Formative Period sites. Although within 35 km of each other, two of the sites were on the ancient shore of Lake Texcoco and two were in the Patlachique Range. Instrumental neutron activation analysis (INAA) distinguished between pottery from the lakeside sites and the piedmont

sites. There also appears to be a unique subset of ceramics collected from the piedmont site of Alitca. These results will be compared to those obtained by LA-ICP-MS and thin section petrography.

**Alex, Lynn (University of Iowa) [57]** *First Chair*; [188] *see Hedden, John*

**Alexander, Dean (National Park Service, Hopewell Culture NHP) [186]** *Discussant*

**Alexandri, Serinah (CSULA), Matthew French (California State University, Los Angeles), Sergio Garza (University Of California, Riverside) And Victor J. Castillo [115]** *Mountain Shrines Where Mortals and Gods Converse: Q'anil, the Maya Jakalteq Sacred Mountain in Huehuetenango, Guatemala*

Maya religious symbolism has an earthly focus with most being manifestations of mountains and caves. Mountains are sacred places referred to by the specific names of guardians or owners who also represent deities or ancestral figures. Since mountains are features of worship, for modern Maya Jakalteq the connections of people and community to earth are expressed at shrines at the summit of Q'anil where they ask deities for protection, the life-giving rains, and intercession on mundane affairs. The belief system, reproduced through ritual acts, anchors the ever-changing present into the precedents of the pre-Columbian past.

**Alexandri, Serinah [115]** *see French, Matthew Patrick*; [115] *see Garza, Sergio*

**Alix, Claire (University of Alaska Fairbanks, Alaska Quaternary Center)**

[146] *Prehistoric Wood Technology in Northwestern Alaska*

Several collaborative projects taking place during the International Polar Year allow analysis of old and new collections of wooden artifacts from the last 1600 years with special focus on wood selection and technology. Results of these analyses raise questions about availability of local driftwood at different places and times and reliance on other wood sources. The excellent preservation of structural timbers also provides some perspective for reinitiating tree-ring dating. This paper presents a synthesis of what is now known of Ipiutak and Thule wood technology and proposes future directions for the development of wood studies in the Arctic.

**Alix, Claire [146]** *see Alix, Claire*

**Allard, Francis (Indiana University of Pennsylvania)**

[62] *Concepts and applications in the study of the life histories of objects*

An introduction to the symposium's presentations, this paper reviews some of the approaches adopted by archaeologists in their study of the life histories of objects. Topics addressed by the paper include the different dimensions along which artifact meaning and function can vary (e.g. time; space; social group), as well as the mechanisms that underlie such modifications (e.g. faulty memory; the removal of artifacts from circulation through burial; the intentional reinterpretation of function). Examples from East Asia and other parts of the world are used to illustrate the potential that these varied approaches hold for such artifact focused studies.

[62] *First Chair*

**Allison, James (Brigham Young University)**

[26] *The Use of Confidence Intervals for Calibrated Radiocarbon Dates*

Current methods of calibrating individual radiocarbon age determinations involve the computation of what are, in effect, Bayesian posterior probability distributions (although the Bayesian nature of the process is not always acknowledged and rarely fully exploited). These posterior probability distributions are usually asymmetric with multiple peaks. Confidence intervals, or "calibrated ranges", constructed from these complex distributions often are discontinuous, with multiple segments to which various probabilities are attached. This approach needlessly complicates reporting and interpretation. In this paper I discuss alternative methods for constructing confidence intervals for calibrated radiocarbon dates that result in slightly longer, but continuous, calibrated ranges.

**Alonso, Alejandra [38]** *see Montufar, Aurora*; [19] *see Ardren, Traci*; [19] *see Wesp, Julie K.*

**Alonso-Olvera, Alejandra, Eric Stockdell (Indiana University) and Trent Stockton (Tulane University)**

[19] *Consumption and Production Patterns for Lithic Tools found in a Sotuta Platform at Xuenkal, Yucatan*

Excavations of one of the Sotuta platforms at Xuenkal (Structure FN129) exposed that elite households comprised a combination of residential and productive space. Exterior areas within the platform were possibly utilized for a chert tool production during the Terminal Classic occupation. In the other hand, obsidian tools were widely distributed but unlikely manufactured at the platform. Differential patterns of lithic production and consumption at FN129 can be explored to improve our understanding on the political economy in which Xuenkal was regionally involved.

**Altschul, Jeffrey (Statistical Research, Inc.) and René Millon (University of Rochester)**

[115] *The 1978 Excavations in the Cave Underneath the Pyramid of the Sun, Teotihuacan*

Shortly after it was discovered, the Teotihuacan Mapping Project undertook test excavations in the cave underneath the Pyramid of the Sun at Teotihuacan. The excavations, which took place in 1978, yielded information on when the cave was used, what types of activities took place, and the overall design of the space. Many aspects of the cave's physical attributes were documented, although the cave's symbolic role in Teotihuacan culture remained, and continues to remain, elusive. This paper outlines what we hoped to learn, how these questions affected our field strategy, and the results of the excavation.

[104] *Discussant*

**Altschul, Jeffrey [37]** *see Kintigh, Keith W.*

**Alvey, Jeffrey [99]** *see Rafferty, Janet*

**Amador, Fabio E. [133]** *see Glover, Jeffrey B.*

**Amador, Julio (UNAM)**

[109] *Symbols of rain, plenty and clan brotherhood in Northwest Sonora*

The most outstanding feature of the Trincheras hills is its semi-architectonic disposition: big scale engraved rocks, paths, terraces, artificially aligned rocks, corrals and rock circles on the hilltops, plazas where the hills and plains meet: places specially auspicious for collective activities and rituals. All these elements in conjunction create a morphological general pattern. We believe that the cultural organization of landscape in these sites is something created for the purpose of efficient everyday productive life and for practicing rituals, specifically hunting and rain making. can be inferred from the analysis of rock art, structures, activity remains and ethnohistoric and ethnographic records.

**Amarasiriwardena, Dula [130]** *see Arriaza, Bernardo T.*

**Ambrose, Stanley [49]** *see Coleman, Magen E.*

**Ameri, Marta (New York University)**

[39] *Reconstructing an Administrative System: Storage and Sealing at Gilund*

The discovery of a cache of sealings at Gilund places the site squarely within an administrative tradition that existed throughout Asia as early as the 6th millennium B.C. The fact that these sealings were discovered in a specially constructed bin in a building that appears to have been used for storage further emphasizes their importance in the local administration. This paper will attempt to reconstruct the administrative system in use at the Gilund in light of evidence from sites elsewhere in the ancient world where a more complete reconstruction has been possible.

**Ames, Kenneth (Portland State University) [44]** *Discussant*

**Amick, Daniel, Anastasia Rogers (Loyola University Chicago), Andrea Egger (Loyola University Chicago), Colleen Karwoski (Loyola University Chicago) and Margaret Walters (Loyola University Chicago)**

[29] *Analysis of the Caballo Mesa Folsom Site in the Central Rio Grande Valley, Southern Jornada del Muerto, New Mexico*

This surface collection from a remote mesa overlooking the Rio Grande appears to represent a large, single component Folsom assemblage. It is dominated by Rancheria chert, available in nearby geologic deposits. Heavy reliance on Rancheria characterizes Folsom lithic assemblages throughout this region, but Caballo Mesa documents the most substantial Folsom workshop of this material yet found. Caballo Mesa appears to have been a key location in regional Folsom settlement strategies. Interestingly, this assemblage is similar in size and content to the Lone

Butte Folsom assemblage located in the Central Tularosa Valley about 120 km east of these Rancheria chert sources.

**Anderson, Amanda [88]** see Killian, Becky

**Anderson, David (U. of Wisconsin-La Crosse)**

[106] *The Nile Goes Up, The Nile Goes Down: Riverine Resource Utilization in the Egyptian Predynastic as seen from el-Mahasna*

Jim Richardson always stresses to his students and colleagues the importance of remembering that humans must live in and interact with their natural environments. My own research has been greatly influenced by the environmentally based approach JBR instills in his students. Traditionally, discussions of Predynastic subsistence have focused on agricultural production and animal husbandry. In this paper, I will discuss the utilization of riverine resources in the Upper Egyptian Predynastic as seen from the site of el-Mahasna. Further, I will examine the impact and influence these resources had on Predynastic society.

[106] *First Chair*

**Anderson, David (Tulane University)**

[192] *Xtobo and the Emergent Preclassic of Northwest Yucatan, Mexico*

Northwest Yucatan has a long tradition of Preclassic archaeology beginning with early work at the sites of Dzibilchaltun and Komchen, however beyond these two sites little was known. In recent years a large Middle and Late Preclassic settlement has been documented in the region, including a large Preclassic center known today as Xtobo. Despite its peripheral location Xtobo exhibits pyramids, sacbes, triadic groups, and a small ballcourt. Recent work at the site has documented a complex settlement pattern with a high structure density, but virtually no reoccupation after the Preclassic making Xtobo a crucial resource for study.

[192] *First Chair*

**Anderson, David (University of Tennessee), Ashley Smallwood (Texas A&M University), D. Shane Miller (University of Arizona), Derek T. Anderson (University of Arizona) and Stephen J. Yerka (University of Tennessee)**

[88] *Paleoindians in North America: Evidence from PIDBA (Paleoindian Paleoindian Database of the Americas)*

The Paleoindian Database of the Americas (PIDBA), available on-line at <http://pidba.utk.edu>, provides locational data on close to 30,000 projectile points and attribute data on over 10,000 from across much of North America. These samples document patterns of land and lithic raw material use, and the changes in numbers of artifacts over time may reflect demographic trends within the Paleoindian period. PIDBA grows through the contribution of primary data, and recent additions include radiometric and bibliographic databases, and updated distributional maps. Ongoing research is directed to adding images of artifacts, and compiling the attribute data into a single comprehensive database.

[40] *Discussant*

**Anderson, David [100]** see Terry, Richard E.

**Anderson, Derek (University of Arizona) and Maria Nieves Zedeño (University of Arizona)**

[113] *Returning to the Country: Prehistoric Hunter-Gatherer Territory Formation in the North American Plains*

Discussions of territoriality in prehistory that link ownership, exclusion, and privilege to the development of complex social systems are seldom relevant for explaining hunter-gatherer territorial organization. Nevertheless, analyses of hunter-gatherer lifeways beginning with the initial colonization of North America require a consideration of land and resource use that integrate ecological, social, and ritual explanations of "rootedness" in, and investment on, the landscape. Temporal depth and geographical expanse makes the material record of Plains hunter-gatherers ideal for building a framework of territory formation, from the establishment of place/resource networks to the emplacement of permanent facilities and structures.

**Anderson, Derek T. [88]** see Anderson, David G.

**Anderson, Elyse (University of Florida)**

[182] *Animals and Ritual: A Zooarchaeological Analysis of Petexbatun Caves*

Although the ritual use of caves and related geological features in the Maya region has garnered increased archaeological attention, the thorough examination of faunal material from these

contexts is still relatively rare. This paper presents the results of the recent analysis of faunal material recovered from caves located beneath the sites of Las Pacayas and Dos Pilas and from the Grieta Principal at Aguateca. The data is examined in the light of recent investigations into contemporary Maya practices of animal bone caching in the Guatemalan highlands as a component of hunting ceremonialism.

[182] *First Chair*

**Anderson, J. Heath (The Pennsylvania State University)**

[20] *In Search of the Teotihuacan Corridor in the Southeastern Puebla Valley*

Since Ignacio Bernal first posed the question of Teotihuacan's status as an imperial capital in 1966, Mesoamericanists have been challenged to investigate the nature of its interaction with neighboring populations. One consistently mentioned indicator of participation in a Teotihuacan-centered imperial trade system is the presence and prevalence of the Thin Orange in ceramic assemblages from sites located along trade corridors stretching across the Puebla-Tlaxcala region. This paper uses least-cost path analysis together with local surface survey data from a 560-square-kilometer survey area around Tepeaca, Puebla to evaluate the material evidence for a Teotihuacan-centered trade route in the southeast Puebla Valley.

[20] *First Chair*

**Anderson, Karen (UC Santa Barbara)**

[81] *Tiwanaku impact on local social identity in the Cochabamba Central Valley*

The Tiwanaku state had a massive impact on expression of social identity in Cochabamba, a rich agricultural zone ~300 km to the southwest of Tiwanaku. Using household and mortuary data, this paper examines the transitions in expression of local identity throughout the Middle Horizon focusing on the Cochabamba Central Valley. This evidence shows that while Tiwanaku symbols became the dominant expression of social identity, other identities were also being expressed including sub-regional affiliations, gender, etc.

**Anderson, Kirk (NAU) and Joshua Edwards (SWCA, Inc. Environmental Consultants)**

[27] *Hillslope erosion at Cerro Jazmin, Mixteca Alta, Oaxaca*

Cerro Jazmin, a hilltop urban center in the Mixteca Alta, was occupied intermittently from approximately 300 BC to AD 1500. The landscape witnessed periods of intensive agricultural activity and extensive terrace construction. Geomorphic studies recorded soil erosion from upslope positions. Re-deposition buried lama bordo terraces under 8 meters of deposits. Valley alluvium contains stacked buried soils with abundant charcoal. Chronostratigraphic reconstruction identifies the timing of erosion related to human use of Cerro Jazmin. Results of this research are useful to understand prehispanic land use and landscape response, and can inform modern farmers of the benefits of sustainable agricultural practices.

Anderson, Kirk [144] *see Bellorado, Benjamin A.*

**Anderson, Meredith (Boston University)**

[135] *Public Understanding of Archaeological Heritage: What Sends the Message Home?*

Effective public outreach at important cultural sites is paramount to collective understanding and preservation. Case studies from three archaeological sites are used in order to analyze how public heritage is interpreted at the site level. Atapuerca, Spain, Newgrange, Ireland, and Jamestown, U.S.A., have very different departure points but retain a common goal—to provide the public with an understanding of the significance of their heritage. Visitor experiences are explored through a study of in situ infrastructure, site management plans, and visitor surveys in a study of the value of different interpretation methods and tools at these diverse sites.

**Andrefsky, William (Washington State University)** [41] *see Noll, Christopher D.*; [44] *Second Chair*; [44] *Second Organizer*; [44] *see Goodale, Nathan B.*; [88] *see Williams, Justin P.* [104] *Discussant*

**Andrei, Tabarev** [167] *see Popov, Alexander Nikolaevich*

**Andres, Christopher and Sarah J. Wille (The Field Museum, Chicago)**

[185] *Looking Forward, Looking Back: Material Culture and Sociopolitical Integration at Chau Hiix, Belize*

In this paper, we consider the results of excavations in the ancient Maya community of Chau Hiix, Belize from the perspective of insights offered into developments during the Terminal Classic and Early Postclassic periods (A.D. 800-1100). Investigations have notably documented a massive



ceremonial deposit in the central precinct together with evidence that many of the community's public buildings were remodeled. This presentation discusses the changing character of Chau Hiix's built environment, relationships between architecture and ceremonial deposits, and the extent to which the archaeological record indexes patterns of sociopolitical interaction reminiscent of earlier periods in the Maya Lowlands.

**Andrews, E. Wyllys (MARI, Tulane University) [19] *Discussant*; [192] *Discussant***

**Andrus, Fred [130] *see Jones, Kevin***

**Anfruns, Josep [145] *see Guerrero, Emma***

**Anidjar, Julie (New York University)**

[142] *Coastal Woodland Adaptation at the site of Palmetto Bluff, South Carolina*  
Human-ecological models applied to the US coastal southeast invariably relate the complex ecology of estuarine zones with unique hunter-gatherer adaptations. While seasonal mobility studies along the southeast coast have been used as evidence for a direct correlation between economic activity and constraining biomes, little empirical evidence has been produced to demonstrate this relationship. This study presents growth increment analyses conducted on the malacological sample from a Deptford Phase shell midden at Palmetto Bluff, South Carolina to 1) examine how site use was structured during this period and 2) question the potentials and limitations of this model in a coastal context.

**Anthony, David (Hartwick College)**

[16] *The Evolution of Eurasian Steppe Pastoralism From the Eneolithic to the Late Bronze Age*  
Recent archaeological discoveries have upended old ideas and created a muddle of new possibilities for understanding the evolution and nature of Eurasian steppe pastoralism. Long-accepted correlations between sedentism versus mobility, cultivation versus the absence of cultivation, and dependence on external versus internal sources of production, have been challenged and overturned. This paper reviews the shifting associations between these factors in steppe pastoral economies from 5000-1200 BC.

**Anyon, Roger (Pima County CRHPO)**

[43] *Before You Dig: Minimizing Conflict and Controversy in Historic Cemetery Excavations*  
Before the first shovel of dirt was excavated at the Joint Courts project area in downtown Tucson, Arizona, on the site of a historic cemetery, two years were spent making preparations and consulting with potential descendant groups. This paper details the consultation process and the steps taken prior to excavation: conducting background research, identifying potential descendant groups, negotiating burial agreements, obtaining a court order and a state permit, issuing public notices, and addressing political and media considerations. Intensive and inclusive preparations prior to excavation proved invaluable in minimizing conflict and controversy, a fundamental goal of any historic cemetery excavation project.  
[79] *Discussant*

**Aragon, Leslie (Arizona State University), and Aaron Bobik (Bates College)**

[31] *What do Visitors Know about Archaeology? Insights from the Homol'ovi Ruins State Park, Arizona*  
Assessing what the typical visitor knows about archaeology is essential for interpretive planning. To assist in future exhibit and program development at the Homol'ovi Ruins State Park in northeastern Arizona, information was collected as visitors toured an on-going excavation; and children were asked to draw an archaeologist during the Park's open house. Most visitors were reasonably well informed about the subject of archaeology in general but were quite surprised to learn what an actual archaeological dig entailed. This poster describes the techniques used to assess visitors' perceptions of archaeology as well as the findings and shortcomings of the methods used.

**Aragon, Leslie [31]**

**Arakawa, Fumiyasu (Crow Canyon) and Christopher Nicholson (The Water Resources Data System at the University of Wyoming)**

[88] *Modeling Quarry Sites in the Central Mesa Verde Region*  
The use of landscape data in a GIS environment has become an important tool in understanding human behavior in relation to the natural environment. The central Mesa Verde region contains a unique lithology of cretaceous deposits of silicified sandstone, mudstone, and quartzite. Of these,

cretaceous Dakota/Burro Canyon quartzite (Kdbq) is one of the most commonly used raw materials for manufacturing formal tools by the residents of the region from the Archaic to Pueblo III periods. This research seeks to develop a GIS predictive model of Kdbq quarry sites in the central Mesa Verde region to target areas for future survey.

**Arana, Jonathan (Jonathan H. Arana), Natalia Donner (UNAM) and Paulina Arellanos**

[92] *Settlement Pattern Studies at El Carrizal, Ver.: A Preliminary Overview*

In the early sixties, archeologist Bertha Cuevas registered a few central mounds from El Carrizal, located in South-Central Veracruz. This paper presents the preliminary results of The El Carrizal Archaeological 2009 Project's settlement pattern study. The objective for this first season was to expand the explored area, so as to obtain a settlement pattern overview. Through comparison with other available studies in the area, this paper aims to provide new information for discussion.

**Araoz, Gustavo (US/ICOMOS) [186] Discussant**

**Arbuckle, Benjamin [145] see Adcock, Sarah**

**Archambeault, Marie (Texas Army National Guard) and Kristen E. Mt.Joy (Texas Military Forces)**

[51] *We are all related; We are all different: The Variables of Tribal Consultation*

The term "Tribal Consultation" implies a standard method of conducting consultation with Tribes. In reality, there is nothing standard about Tribal Consultation, or at least, there shouldn't be. Cultural differences between tribes are well documented, yet, we consistently expect the Tribes to adjust to our cookbook methods of consultation. This leads to inadequate consultation resulting in little or no input from the Tribes. As such, cultural resources managers must adapt our consultation methods to the individual tribes to be successful. Even the simplest act of communicating meeting times is complicated by the differing ways Tribes communicate with the outside world.

**Arco, Lee (Washington Univ. St Louis)**

[128] *The Geoarchaeology of Poverty Point Settlement at Jaketown: Recent Research and Preliminary Results*

Jaketown is the second largest extant Poverty Point settlement and provides the foundation to our understanding of the Late Archaic culture in the Yazoo Basin, Mississippi. Despite previous study, a lack of reliable chronometric data and deficient knowledge of the complex stratigraphy have led to varied interpretations of the site's cultural and geomorphologic history. This paper presents preliminary findings of recent geoarchaeological research at Jaketown that provide a refined understanding of the site, and constitute a first step toward expanding our regional knowledge of Poverty Point society and of the nature of prehistoric human-landscape interactions in the Lower Mississippi Valley.

[128] *First Chair*

**Arcoleo, Jenna (College of Wooster) and P. Nick Kardulias (College of Wooster)**

[145] *SEM Analysis of Paints from a Pharaonic Mummy*

This study explores two issues: the correlation between the manufacturing of paints in the Ptolemaic period in the city of Akhmim, Egypt and the trade relations of the time period; and the relationship between art and Egyptian religion. Ten paint samples from a Ptolemaic period Akhmim mummy sarcophagus and cartonnage were analyzed using a scanning electron microscope to determine elemental constituents; further analysis of related Akhmim mummies may be conducted. With these results, the paint compounds were cross referenced with local materials and foreign trade materials. The study provides information on the internal and external trade relations of Ptolemaic Egypt.

**Arden, Traci (University of Miami), Alejandra Alonso (University of Calgary) and T. Kam Manahan (Kent State University)**

[19] *Shell tool production and the Terminal Classic political economy of Xuenkal*

One expected consequence of the political control Chichén Itzá had over its closest neighbors is regional diversification of economic activities. Recent excavations in a Sotuta associated platform at Xuenkal confirm that local corporate elite groups were involved in craft diversification, more than specialization. Elite residential groups at Xuenkal were involved in a variety of shell production activities as demonstrated by evidence from platform FN129, associated with other craft debitage. We suggest domestic space was modified to accommodate economic activities that were not practiced within domestic settings in earlier periods.

**Arden, Traci [19]** see Manahan, T. Kam; **[86]** see Magnoni, Aline; **[19]** see Wesp, Julie K.

**Arellanos, Paulina [92]** see Arana, Jonathan H.

**Arellanos Soto, Paulina [92]** see Donner, Natalia R.

**Areshian, Gregory (University of California), Boris Gasparyan (Institute of Archaeology and Ethnography of the National Academy of Sciences of the Republic of Armenia), Keith Wilkinson (University of Winchester), Pavel Avetisyan (National Academy of Sciences of the Republic of Armenia) and Ron Pinhasi (University College Cork)**

[50] *The Chalcolithic of the Near East and Southeastern Europe in a New Perspective:*

*Discoveries in the Cave Areni-1, Armenia*

In 2007-08 four meters thick deposits of the Neolithic and Chalcolithic were excavated in the cave Areni-1 located in southeastern Armenia. Wonderfully preserved organic remains include wooden artifacts, seeds, ropes, textiles, straw, grass, reeds, and dried fruits (grapes and prunes) dated between 4223 and 3797 BC (14C calibrated). Other finds suggest the possibility of wine making in the cave. A human brain was found inside a ritually deposited plastered head. Pottery assemblages stipulate a revision of the macro-regional Chalcolithic-Early Bronze Age chronology and support a partial synchronization of the Maikop Culture of Southeastern Europe with the Uruk civilization in Mesopotamia.

**Argüelles, Amaranta [38]** see Quezada, Osiris

**Arias, Mario [117]** see Salgado Gonzalez, Silvia

**Arias, Veronica**

[53] *The Diffusion of Geographic Information Systems within Academic Archaeology*

Despite the growing use of GIS in archaeological studies, there are very few, if any, comprehensive reviews of the development of GIS in the discipline or its influence within the broader realm of spatial archaeology. Much of the literature is limited to GIS applications in archaeological research, which does not address the degree to which the technology has been adopted and diffused within the discipline. This poster presents the results of a content analysis of published studies of the last two decades that details the frequency, type, and level of analytical complexity of GIS use in academic archaeology.

**Arikan, Bulent (Arizona State University)**

[134] *A New Approach in Site Mapping: Grass GIS and Vector Re-positioning*

The increasing availability of high-resolution remote sensing imagery has the potential to revolutionize archaeological site mapping and recording. Without expensive equipment or software, even small sites with visible architecture can be identified and mapped in georectified imagery. Even recently destroyed or damaged sites can be mapped whether or not base maps exist. I present examples of combining remote sensing data from Google Earth, CORONA, Terra/ASTER, and SRTM to map early metal age sites in the Wadi el-Hasa, southern Jordan. Such digital maps can be exported into GIS software allowing analysis of spatial patterning for studying social and ecological dynamics.

**Armitage, Ruth Ann and Marvin Rowe (Texas A&M University-Qatar)**

[30] *"Nondestructive" Radiocarbon Dating of Textiles and Perishable Artifacts: A Review of Progress to Date*

A 'non-destructive' method for radiocarbon dating perishable archaeological remains requires replacing the two very destructive steps in current radiocarbon dating: (1) pretreatment to remove contaminating humic acids; and (2) extraction of carbon for accelerator mass spectrometric (AMS) analysis. We have successfully used low-temperature argon and oxygen plasmas to extract sufficient carbon from the surface of an artifact without visibly changing it. To address the problem of humic contamination, we have used a gentle pH 8 phosphate buffer. The phosphate treatment combined with the plasma extraction yields AMS dates that are statistically indistinguishable from those obtained through standard techniques

**Arnold, Bettina (U. of Wisconsin-Milwaukee)**

[177] *The cultural construction of the Celtic warrior: an archaeological critique*

Transmuted in the textual record of the oral traditions of Ireland, Wales and Scotland, the Celtic warrior trope is deeply embedded in representations of formalized violence, a heroicized image

that impacts public perceptions of warfare beyond western Europe as a legacy of colonialism. Interpretations of Iron Age violence are filtered through the value systems of literate Greece and Rome, the latter influence extending into the monastic texts. This critique of the Celtic warrior model examines the archaeological evidence for Iron Age European violence as embodied in the physical remains of individuals and encoded in the material culture symbolism of warfare.

**Arntzen, Katherine (University of Denver)**

[29] *Ocosta-by-the-Sea: A city in three narratives*

The Ocosta, Washington railroad boomtown site is illustrated in three narratives: the city-as-imagined, the city-as-built, and the city-as-remembered. Each narrative stems from a separate research method: archival, archeological geophysical prospection, and oral history. Each source of information highlights a different perspective of Ocosta. Weaving together archival, archeological, and oral history information creates a stronger portrait of the past than is otherwise possible. The Ocosta town site is examined as a case study intermingling research methods to obtain a clearer picture of the past. Preliminary results of these interlocking strands of research will be illustrated, bringing together the elaborate puzzle that is Ocosta-by-the-Sea.

**Arratia, Elizabeth [12] see Vallieres, Claudine**

**Arriaza, Bernardo (Universidad de Tarapacá), Dula Amarasiriwardena (Hampshire College), Basal Bandak (Hampshire College), Lorena Cornejo (Laboratorio de Investigaciones Medioambientales de Zonas Áridas, CIHDE/CODECITE, Universidad de Tarapacá, Arica) and Sam Byrne (Hampshire College)**

[130] *Exploring arsenic contamination in antiquity: the Chinchorro mummies case*

This paper explores to what extent pre-Columbian populations from Northern Chile were affected by exposure to arsenic. Using laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS) we tested arsenic levels in a single strand of hair from 24 Arica mummies. Each hair was cleaned using standard procedures and ablated using a 266 nm Nd-YAG UV laser. Hair samples were also examined for diagenesis, though minimal diagenesis was found. Arsenic hair levels in the mummies ranged from < 0.2 to > 20.5 µg/g. Our study shows that ancient people of northern Chile were significantly affected by exposure to environmental arsenic.

**Arriaza, Bernardo [130] see Boston, Christine E.; [71] see Cassman, Vicki**

**Arroyo, Barbara (Museo Popol Vuh UFM Guate) [58] Discussant**

**Arsenault, Daniel (UQAM, Montreal, Quebec)**

[84] *Between the twilight zone and the outer limits: Finding and studying the eastern frontiers of rock-art in the Canadian Shield!*

Canadian Shield rock-art sites have contributed to the construction and use of the world-view of the Ancient Algonquians in the context of mapping their territory and pointing out the location of natural and symbolic resources. Some clues are available for helping us to decipher the content and meaning of a rock-art site as referring to the deictic aspects of it. This paper will discuss the importance of rock-art in relation to the boundaries of the Ancient Algonquian landscapes, but also with regard to the intangible world between which some of the rock-art sites appear to have been an interface.

**Arthur, John (USF St. Petersburg), Bizuayehu Lakew (Ministry of Culture, Ethiopia) and Matthew Curtis (University of California Santa Barbara)**

[107] *Historical Archaeology and Oral Tradition in the Gamo Highlands of Southern Ethiopia*

There is little known about the history and prehistory of southern Ethiopia, including the Gamo highlands. Over the last four years, we have engaged in oral tradition, ethnoarchaeology, and archaeological testing to reveal the origin, location, and organization of historical settlement in the region. This paper will address how these three methods intersect to create a Gamo history that connects past and present cultural and caste identity.

[107] *Second Chair*

**Artz, Joe (University of Iowa)**

[138] *Site Structure and Landscape Context of the Neolithic-Bronze Age Mortuary of Bolores, Rio Sizandro, Portugal*

Total station data managed in a geographic information system (GIS) enable a multiscalar approach to the geospatial context of the Bolores site. At a microscale, multiple points on individual bones and rocks, combined with photographs, reveal the spatial fabric of cultural and

natural deposits. Mesoscale, three dimensional reconstruction of the outcrop where the shelter is located may help conceptualize the ritual space within which the mortuary itself was situated. Macroscale topographic mapping and geological borings permit reconstruct of the landscape when the site was in use, as well as subsequent landscape alterations.

**Ashcraft, Scott (National Forests in N.C.) and Lorie Hansen (NC Rock Art Survey)**

[109] *The Cherokee's Tsul kälü', and the Judaculla Rock petroglyphs of Western North Carolina*

The Judaculla Rock petroglyphs are one of several prominent geographic features that make up the Cherokee 'mythscape' of Tsul kälü within the Southern Appalachian Mountains. A giant who held dominion over all game animals, Tsul kälü was also considered responsible for some of the many images that constitute the Judaculla Rock petroglyphs of Jackson County, North Carolina. Conclusions derived from recent archaeological, historic and ethnographic study reveals the enduring importance of Place to the Cherokee Indians.

**Ashley, Keith H. [142] see Rolland, Vicki L.**

**Ashmore, Wendy (U California Riverside)**

[169] *Re-Peopling Classic Quirigua*

The people who built and lived at Quirigua emerge steadily from a once-dimmed picture of Classic times. Long overshadowed by their most famous king, the nobles, artisans, and farmers of this socially diverse community gain increasing recognition for negotiating available options of daily life. This paper argues that circumstances as momentous as environmental calamity, factionalism, and kingly wars shaped short- and long-term strategies in this relatively small but engaged populace. As elsewhere in Southeast Mesoamerica, Bob Sharer's research is fundamental for the expanding inferences scholars now make about intricate interactions, in this case among people of ancient Quirigua.

**Asmerom, Yemane [83] see Kennett, Douglas J.**

**Atherton, Heather (Columbia University)**

[13] *18th-Century Pueblo Polychromes in a Spanish Colonial Context*

Polychrome and glaze-painted pottery types found at the 18th-century, Spanish colonial village of San Jose de las Huertas, situated in the middle Rio Grande, show similar complexities in ceramic production and distribution as that of Pueblo villages. In this paper, an analysis of paste and temper is used to examine the places from which various ware types originated. Ware types and area of manufacture are not as directly correlated as previously thought, suggesting that complex relationships of both exchange and social boundedness existed between various Pueblos and their colonial neighbors.

**Atkins, Ashley [173] see Hantman, Jeff**

**Augustine, Jonah (University of Chicago), Sandra Paye (Universidad Mayor de San Andres, La Paz, Bolivia) and Wes Mattox (McGill University)**

[12] *Residential Occupation in the Periphery of Tiwanaku: Preliminary Results of the 2007/2008 Mollo Kontu Field Seasons*

Recent studies outside of the monumental core of Tiwanaku have found that the city contained numerous residential compounds separated by large adobe walls. We present preliminary information on excavations of a residential sector at Mollo Kontu. Here, we encountered at least four recognizable occupations including associated domestic features, such as hearths and middens. This residential sector experienced cycles of abandonment and reuse, maintaining its orthogonal grid throughout all occupations, but changing other architectural details. Investigation of this compound provides insight into urban structure, the significance of local variation, and the patterns of daily life within the city of Tiwanaku.

**Ausel, Erica (Indiana University) and Della C. Cook (Indiana University)**

[5] *Sit up! Assessment of Femur Sexual Dimorphism in Two Native American Populations*

It has been observed that North American Mississippian and Woodland cultures portray gender specific sitting postures in their ceramic and figurine art. Men are shown legs tucked under in a fully upright position while women, although similar, are shown leaning to one side. Assuming this behavior was learned before or during adolescence and continued through adulthood, we expect to find differences between the sexes. Collection from the Mississippian period Klunk site and Woodland period Schild site, curated at Indiana University at Bloomington's Osteology and Paleopathology Laboratory, were utilized to assess the affects of sitting posture between males and females.

**Avery, George [53]** *see Ernenwein, Eileen G.*

**Avetisyan, Pavel [50]** *see Areshian, Gregory E.*

**Avila, Florencia [151]** *see Nielsen, Axel E.*

**Awe, Jaime (Institute of Archaeology), Gabe Wrobel (University of Mississippi) and Jim Aimers (SUNY Geneseo)**

[185] *Terminal Classic Deposits at Cahal Pech and their Implications for Concepts of Rapid Abandonment and De-facto Refuse*

Recent investigations in the site core of Cahal Pech have recovered intriguing new data for Terminal Classic Maya activity at this Belize Valley site. The materials, which were recovered in a tomb, a burial, and on plaza floor deposits, include a diverse assemblage of cultural remains. Similar deposits at other western Belize Maya sites have been interpreted as evidence for de-facto refuse or rapid abandonment. Contextual analysis of the Cahal Pech data provides limited support for either argument and suggests that the deposits could also be associated with post-abandonment rituals, site reoccupation, or both.

**Awe, Jaime [83]** *see Moyes, Holley; [83]* *see Brook, George A; [83]* *see Prufer, Keith M.*

**Baca, Keith [99]** *see Rafferty, Janet*

**Bach, Justin [47]** *see Davis, Loren G*

**Bach, Randall [192]** *see Hansen, Gregory J.*

**Bachand, Bruce [36]** *see Lowe, Lynne S.*

**Baer, Sarah, Karen Reed (SWCA Environmental Consultants) and Rebecca Schwendler (SWCA Environmental Consultants)**

[34] *Using Wickiups to Examine Late Prehistoric and Protohistoric Exchange between the Great Basin and Western Colorado*

Numerous archaeological sites containing free-standing and collapsed wickiups are found in the Piceance Basin of western Colorado. Remarkably well-preserved, these structures and nearby sites containing diagnostic projectile points, ground stone, ceramic, and obsidian artifacts, and glass beads, demonstrate that the area was a pathway of exchange between the Great Basin and western Colorado during the Late Prehistoric and Protohistoric periods. These archaeological remains enhance our knowledge of how prehistoric people and Protohistoric Utes in western Colorado incorporated non-local goods and ideas into their cultural systems.

**Baer, Sarah [34]** *see Baer, Sarah*

**Baichtal, James [175]** *see Carlson, Risa J.*

**Bailey, Catherine E. [162]** *see Graesch, Anthony P.*

**Bailey, Doug (San Francisco State)**

[141] *Cuts, dissections, and holes: consequences of breaking the surface*

What happens when one cuts through an otherwise continuous surface? What happens when the skin is pierced, when the ground is trenched, when a wall is opened up? When gaps form, when content is missing, when ellipsis (and what is missing) becomes more important than what is present? What are the consequences of creating (or encountering) negative space? This paper asks these questions in the context of the Early Neolithic of southeastern Europe (6000-5000 cal. BC) with particular attention to what are traditionally understood as pit-houses. Potential answers push debate beyond function, symbol, or (even) meaning and explanation.

**Bain, Allison [146]** *see Dussault, Frédéric*

**Bair, Daniel (Brigham Young University), Bruce Dahlin (Shepard University), Marilyn Masson (SUNY Albany) and Richard Terry (Brigham Young University)**

[100] *Soil Geochemical Analysis of Public Squares at the Postclassic City of Mayapan, Yucatan*  
Recent analyses of the spatial and social organization of Postclassic Mayapan have drawn

attention to open squares in the site center that may have served as marketplaces. Squares K and R are connected to principal entrances and avenues of the ancient city, contain few structures and could have accommodated large numbers of people or market activities. Soil research has been used to identify activity areas within a site where little artifactual evidence is left to identify the area and where perishable materials were used. We used geochemical analyses to determine concentrations of phosphorus and heavy metals in Square K. Patterning of these elements may help identify market stalls and walkways and could give added support to the marketplace hypothesis.

**Bair, Daniel [100]** *see Terry, Richard E.*; **[100]** *see Coronel, Eric*

**Bair, Rachel [100]** *see Coronel, Eric*

**Baitzel, Sarah (UC San Diego) and Paul Goldstein (UCSD)**

[81] *Social Identity, Migration and Return in the Tiwanaku diaspora: A mortuary and paleodemographic approach*

The Tiwanaku colonization of the Moquegua valley has been described as the migration of tens of thousands of highlanders and descendants, permanently resident in a lowland agropastoral niche. However, recent mortuary archaeology suggests diverse mortuary practices in the Tiwanaku diaspora, while a comparison of paleodemographic data from Moquegua Tiwanaku cemeteries to uniformitarian mortality curves suggests an underrepresentation of older adults. Socially embedded explanations of return migration, alternate burial treatment among pastoral and agrarian populations, and mummy repatriation are considered in light of migration theory and parallel settlement pattern and household archaeological studies of Tiwanaku society.

**Ball, Joseph [133]** *see Glover, Jeffrey B.*

**Ballantyne, Marianne and Kenneth Tankersley (University of Cincinnati)**

[174] *Miami Fort: A Hopewell Hydraulic Structure*

Miami Fort, located in southwestern Ohio, is a Hopewell hilltop earthwork approximately nine kilometers in length. Detailed geological analyses demonstrate that the earthwork was complex gravity-fed hydraulic structure, which channeled spring waters and surface runoff to sites where indigenous plants and cultigens were grown in a highly fertile, but drought prone loess soil. Drill core sampling, x-ray diffractometry, high-resolution magnetic susceptibility analysis, and radiocarbon dating demonstrate that the earthwork was built after the Holocene Climatic Optimum and before the Medieval Warming. The results of this study suggest that other Hopewell hilltop earthworks are hydraulic structures rather than fortifications.

**Ballard, Mary [118]** *see Solazzo, Caroline*

**Ballenger, Jesse (University of Arizona) and Vance T. Holliday (University of Arizona)**

[18] *Palominas Arroyo: A Late Pleistocene-Holocene Alluvial Record from the Upper San Pedro River, Southeastern Arizona*

Located on the U.S.-Mexico border, 5km upstream from the Lehner Clovis site, the Palominas Locality is situated inside the mouth of a large arroyo that spills into the San Pedro River. Three deep cores provide a 14m record of arroyo stratigraphy dated post-bomb to 11.1k (BP). A dramatic change in the fluvial system is observed below 12m, when sediments from the San Pedro River filled the mouth of the arroyo between 8.4-11.1k (BP). This poster presents stratigraphic, radiocarbon, stable carbon isotope, and palynological data in the context of Clovis-age paleoecological and paleohydrological conditions.

**Baltus, Mellisa [23]** *see Kruchten, Jeffery D.*

**Balzotti, Chris (Brigham Young University), Richard Burnett (Brigham Young University) and Richard Terry (Brigham Young University)**

[100] *Vegetation and Soil Resources of the Ancient Maya site of Ramonal, near Tikal, Guatemala*

Soil profiles of the archaeological site of Ramonal have been analyzed for carbon isotopic evidences of ancient maize agriculture. In the intervening 1200 years since abandonment in the terminal classic many of the forest trees are only in the second or third generation, possibly leaving clues to what forest types may have been present during the ancient occupation of the site. Past isotope data is compared with modern vegetation patterns as well as archaeological structures to better understand the relation between the ancient Maya and their environmental.

**Balzotti, Chris [100]** *see Rees, Gordon L*

**Bandak, Basal [130]** *see Arriaza, Bernardo T.*

**Bandy, Matthew (SWCA Environmental Consultants)**

[119] *Farming/Language Micro-Dispersals in Southern Andean Prehistory*

The Formative Period archaeological record of the Titicaca Basin and adjacent regions is examined in order to tentatively reconstruct a series of agricultural population expansions. These expansions are found to correspond to archaeological culture areas and to protohistoric language distributions. The results suggest that Tiwanaku was principally Aymara-speaking. Building on this case study, a general model is proposed to describe the formation of what Bellwood calls "starburst" or "heartland" zones. The model may further be used to explain the puzzling differences between Old and New World dispersal centers.

[34] *see Phillips, Scott C.*

**Banning, Edward (University of Toronto), Alicia Hawkins (Laurentian University) and Sarah T. Stewart (URS Canada Inc.)**

[155] *Quality Assurance in Archaeological Survey*

Whether for academic research objectives or to meet the demands of Cultural Resource Management, it is critical that we can rely on the results of archaeological surveys. However, surveys are routinely carried out and their results delivered as publications and reports to clients with little or no mention of steps taken in survey design, implementation, or evaluation to assure the quality, accuracy, and reliability of those results. In this paper, we discuss steps that can be taken to address this shortcoming, particularly in the evaluation of surveyors' effectiveness and detecting archaeological remains and characterizing common parameters of the archaeological record.

[155] *First Chair*

**Banning, Edward [183]** *see Gregg, Michael W.*

**Barba, Luis (NAL University Of Mexico)**

[115] *Geological environment and the tunnel under the Pyramid of the Sun.*

Based on the study of geological environment of the area where Teotihuacan was built and the survey of the depressions and tunnels of in the area, the natural origin of the cave under the Pyramid of the Sun was reviewed. The characteristics of the geological materials underlying the nuclear part of the Teotihuacan City and the ancient excavation techniques of the mining tunnels nearby, support the idea that we are dealing with a previously defined tunnel excavated using well-known mining techniques instead of a natural cave.

[148] *see Blancas, Jorge; [38] see Ortiz, Agustin*

**Barbosa, Débora [139]** *see Mandarino, Marcelle Costa*

**Barbour, Warren (University at Buffalo, SUNY), Joshua J. Kwoka, Mia M. Jorgensen and Monique Boudreau**

[181] *New Data from Plaza I, Oztoyahualco, Teotihuacan, Mexico*

Our analysis of Plaza I at Teotihuacán focuses on the archaeological material from Cuanalan to Tzacualli ceramic phases excavated under the direction of René Millon. The collection from Millon's 1959 excavation is currently held at the University at Buffalo and includes bone tools, ceramic sherds, figurine fragments, faunal material, and obsidian. Preliminary results focus on understanding Plaza I in light of post- 1959 survey, excavation and interpretation. Our findings have implications for delineating periods of occupation and identifying both public and domestic activities within and near Plaza I.

**Bardsley, Andrea (California State University, Long Beach) and Carl Lipo (CSU Long Beach)**

[29] *Luminescence Dating and the California Desert*

Studies in ceramics have been an important line of research in archaeology for over a century, specifically in North American archaeology. The following is a study of Mojave Desert ceramics which incorporates luminescence dating techniques. This study produces temporal information concerning the prehistoric human occupation and attendant production of ceramics in the Soda Lake region of the Mojave. Temporal and geographic data are compared to existing data from surrounding regions and will provide a clearer picture of human activity in this part of the desert.



**Barker, Alex W. [130]** *see Rosania, Corinne N.*

**Barker, Andrew (University of North Texas), Barney Venables (University of North Texas), Jonathan Till (Crow Canyon Archaeological Center) and Steve Wolverton (University of North Texas)**

[18] *Total Organic Carbon Profile of Corrugated Grayware Sherds from Goodman Point Pueblo*  
In order to demonstrate the applicability of total organic carbon (TOC) measures to ceramic residue analysis, we used a TOC boat sampler to test a series of corrugated grayware sherds from Goodman Point Pueblo, 5MT604, a Pueblo III site in southwestern Colorado. While indiscriminant in terms of identifying specific organic components, this technique allowed us to evaluate the physical distribution of organics within our samples. In turn, this has allowed us to develop better sampling strategies for future testing while providing insight into the nature of residue deposition in corrugated grayware vessels.

**Barker, Andrew [130]** *see Wolverton, Steve*

**Barker, Claire (George Washington University)**

[31] *Designing an Exhibit Around Ceramics*

Ceramics are integral to any exhibit featuring the American Southwest. During my years with the Homol'ovi Undergraduate Research and Opportunities Program, I was involved with two different methods of ceramics exhibition: a computer database and a display case. The computer database was a new innovation at the visitor center of the Homolovi Ruins State Park; therefore I developed this exhibit from scratch. My work on the display case was based off of the work of an earlier student. This poster will explore these two methods of displaying ceramics and why ceramics are an important tool for exhibits on Southwestern culture.

**Barket, Theresa (U.C. Riverside) and Colleen A. Bell**

[88] *Tabular Scrapers: Function Revisited*

Tabular scrapers are common in archaeological sites dating to the Chalcolithic and Early Bronze Age of the Levant. The question of their function remains a subject of debate. The research conducted thus far on tabular scrapers proposes they functioned variously as butchery knives, reed scrapers, and sheep shearing implements. This experiment tests the notion that they were used for shearing sheep. Eleven scrapers were replicated and utilized to partially shear three sheep. For comparative purposes, additional scrapers were replicated and used to cut meat. The experimental scrapers were then subject to a low-power examination at 10x, 20x, and 40x.

**Barnes, Edwin [133]** *see Folan, William J.*

**Barnes, Zonna (SWCA), Michelle Delmas (SWCA Environmental Consultants), R. Ashley Fife (SWCA Environmental Consultants), Rebecca H. Schwendler (SWCA Environmental Consultants)**

[34] *Personal Ornamentation and Cultural Transformation in Late Prehistoric and Protohistoric Western Colorado*

The Piceance Basin of western Colorado was a cultural crossroads during the Late Prehistoric and Protohistoric periods and provides ample archaeological evidence for material exchange and cultural transformation. This poster examines the distribution of personal adornments, particularly glass trade beads, to investigate how trans-cultural exchange affected social relationships and cosmologies. A variety of evidence suggests that the symbolic and economic importance of indigenous personal adornments changed over time as groups incorporated new materials into their existing cultural systems.

**Barrett, Jason (Texas A&M University)**

[48] *Environmental Influences on the Use of Lithic Waste*

This paper explores the influence of temporal fluctuations in natural resource availability on perceptions of waste utility. Waste is proposed as a fluid concept among the Maya that was regarded as a latent resource with situational utility. Stone tool production waste, whether in the form of debitage or rejected preforms, is commonly found either incorporated into the construction fill of architectural features, in the context of lithic workshop deposits, or within domestic middens. Such waste also remained in or was reincorporated into a systemic context by changing perceptions of utility and need.

**Barrionuevo, Monika [45]** *see Nash, Donna J.*

**Barse, William (Smithsonian Institution) and Frank Vento (State University of Pennsylvania, Clarion)**

[139] *Paleosols, Isla Wayuco and the Orinoco Barrancas Tradition*

Excavations at Isla Wayuco, located in the Atures Rapids on the Orinoco River, have provided radiocarbon dated paleosol contexts for Barrancas Tradition components. Similar paleosol contexts for Barrancas Tradition components have been documented at other sites in Amazonas State, Venezuela, all dating to the later part of the first millennium AD. This paper reviews these sites, the implications that the paleosols offer for regional climatic reconstruction and the dating of the Barrancas Tradition and related ceramic components in the Orinoco Valley.

**Bartek, Christopher**

[145] *Ancestral Polynesian Pottery Production and Exchange Analysis Using LA-ICP-MS*

This project examines the production and distribution of ancestral Polynesian pottery on Tutuila, American Samoa. Currently, almost nothing is known about ceramic production and exchange. LA-ICP-MS will be used to source clay and temper material to specific geological formations. Ceramic attribute analysis will be used to identify technological styles, which will determine specific production groups. Variations of clay and temper resources will be able to determine the extent of exchange that occurred, which serves as an important role in cultural change. The project will help to understand the number of production groups per village, production organization, and exchange between villages.

**Bartlein, Patrick [83]** *see Kennett, Douglas J.*

**Barton, C. Michael (Arizona State University)**

[1] *From Narratives to Algorithms: Extending Archaeological Explanation Beyond Archaeology*

The static, fragmentary archaeological record requires us to construct models of the human past. Traditionally, these have been narratives that make compelling stories but are difficult to evaluate. Recent advances in geospatial and agent-based modeling technology offers the potential to create quantitative models of human systems, but also challenge us to conceive of human societies in ways that can be expressed in algorithmic form. Besides making our own explanations more robust, integrating such quantitative modeling into archaeological practice can produce more useful accounts of human systems and their long-term dynamics for other disciplines and policy makers.

[1] *Second Chair [1] Second Organizer*

**Barton, Loukas (National Park Service), Christopher Morgan (Utah State University), Dongju Zhang (Lanzhou University) and Robert Bettinger (University of California, Davis)**

[44] *The Economics of Stasis: Pleistocene-Holocene Quartz Industries on China's Western Loess Plateau*

Though successive hominid populations faced dramatic environmental changes and exploited China's western Loess Plateau very differently through time, their lithic industry was remarkably resilient, consisting of a simple, struck-pebble quartz tool tradition that persisted for more than 80,000 years. This persistence reflects the economics of a mobility pattern dictated mainly by the distribution of raw materials and other resources in a vertically stratified landscape. While lithic technologies varied slightly over time and distinct lithic industries came and went on the periphery of the Loess Plateau, costly toolstone acquisition and tool manufacture were largely irrelevant to Pleistocene-early Holocene regional adaptive strategies.

**Barton, Loukas [44]** *see Bettinger, Robert*

**Bar-Yosef, Ofer (Harvard University) [16]** *Discussant*

**Bar-Yosef Mayer, Daniella E. [3]** *see Beyin, Amanuel Y.*

**Bate, Emma (Indiana University)**

[5] *Ghosts of the Past: Reanalysis of Artifacts from Long Bay, San Salvador, Bahamas*

Using archaeological collections to answer new questions often involves more than just analysis or reanalysis of artifacts. Often it requires piecing together the research questions and procedures used by the original investigator in producing the data. It also may require confronting issues of long-term preservation of artifacts and the records that give the data meaning. This paper will discuss how both the research agenda of the original excavator and the preservation of the data at the Long Bay Site, San Salvador Island, Bahamas have influenced analysis of this important contact-period site.

[5] *First Chair*

**Batun-Alpuche, Adolfo (University of Florida)**

[143] *Market Participation and Land Use Changes in a Prehistoric Maya Community: The Case of Late Postclassic Buena Vista, Cozumel, Mexico*

The late postclassic period (A.D 1200-1500) of the northeastern Maya lowlands is a period of increasing market participation, movement of bulk goods, standardization of production, mass production of basic household resources, and general coastal community growth. The use of intensive forms of production and their role in settlement pattern decisions have been studied in other regions and periods of the Maya lowlands. However, Late Postclassic agrarian production organization, and its role in the spatial arrangement and distribution of coastal agrarian communities is still poorly known. This paper presents some of the results of a settlement pattern study conducted in the site of Buena Vista, Cozumel, Mexico. In this paper the author discusses agrarian land use patterns during the late postclassic period to show how stone-wall demarcation of the entire community landscape was used to increase agricultural and beekeeping production in response to market demands.

**Bauer, Andrew (University of Chicago)**

[136] *Producing the Political Landscape: Privileging Places and Practicing Social Differences in Iron Age northern Karnataka*

Despite the apparent absence of large-scale political authority during the South Indian Iron Age, it is clear that a variety of practices oriented social relations toward strategic goals that created social inequalities. Thus, I consider a broad range of past actions as political, specifically those that negotiated access to the social and symbolic resources through which enabling social differences were recreated. In this paper, I will argue that the production of differential access to material and symbolic resources created unequal abilities to (re)constitute places and mobilize labor, which effectively reauthorized privileged access and certain social relationships.

[155] *see Ghazal, Royal O.*

**Bausch, Ilona (Leiden University)**

[62] *Shifting meanings and functions in material culture: jadeite artifacts in prehistoric Japan*  
Jadeite artifacts were in high demand in Japan since the hunter-gatherer Jomon period. Derived from one isolated source area at the Japan Sea Coast, they entered long-distance exchange networks within Japan from at least 5500BP. However, the wider context of their creation, transmission and role changed through time, as can be seen from excavated production and consumption sites. The shift in their meaning and function starting between the Middle and the Late Jomon (ca. 4000BP)—from ritual objects that benefited the whole community, to individually owned ornaments and prestige goods— reflects broader changes in subsistence activities, social structure and worldview.

**Bautista, Stefanie [97]** *see Chapa, Reymundo*

**Baxter, Jane (DePaul University) and Michael Steven Marshall (DePaul University)**

[150] *Rethinking Islands as Analytical Units: Regional Variation in Historic Burial Practices on San Salvador, The Bahamas*

Archaeologists working in the archipelagic nation of the Bahamas traditionally have used contemporary geo-political entities as units of analysis. Employing individual islands as analytical units has facilitated inter-regional comparisons, but also has likely normalized cultural and material variations found on individual islands in the historic and prehistoric past. This paper explores regional and local differences in late 19th and early 20th century cemetery monuments on the island of San Salvador, The Bahamas. Comparisons among five local cemeteries from diverse parts of the island have revealed the elaboration of local mortuary customs as well as patterns of influence from around the island.

**Beach, Charles [69]** *see Wilkes, Stephen*

**Beach, Timothy (Georgetown University) and Sheryl Luzzadder-Beach (George Mason University)**

[158] *Models of wetland formation and management in the Maya Lowlands*

Based on more than 50 excavations from 2000 to 2008 we present two models of ancient Maya wetland formation and use and compare these with existing models. These models derive from multiple lines of evidence: geomorphology, soil chemistry, remote sensing, and ancient management. The first model applies to where rising water tables submerged Preclassic fields and Maya farmers adapted gradually by draining fields after the Late Preclassic. The second

model applies to a large-scale, preplanned field system, built in the Terminal Classic and abandoned in the Postclassic. These cases show significant diversity and complexity even over a short distance.

[158] *First Chair*

**Beach, Timothy [83]** see *Dunning, Nicholas P.*; [158] see *Luzzadder-Beach, Sheryl*

**Beale, Nicholas [94]** see *Gilman, Patricia A.*

**Bean, Andy [43]** see *Davis, Ivan W*

**Beard, Jon [67]** see *Williams, Joel C.*

**Beale, Christine (Univ of Hawaii at Manoa)**

[45] *Duality in Social Organization and the Origins of Complexity in Rural Bolivia*

Investigations of inter-household socioeconomic patterns in two Tiwanaku-contemporary Bolivian villages, Condor Chinoka and Jachakala, reveal long-term changes in their social and economic organization, including incipient complexity at Jachakala. Broader theoretical implications are discussed, and testable hypotheses generated for future work. I explore one in depth, that larger social groupings, when synonymous with economic organizational units, can cooperatively take greater advantage of wealth-generating activities than single households in a community. Thus Andean duality inherent in ayllus and moieties may have facilitated incipient complexity, whereas villages without marked intra-community divisions responded in less predictable ways to opportunities for socioeconomic differentiation.

**Beaver, Joseph**

[88] *Ungulate Overhunting: Simulation Models and the Importance of Sex Ratios*

The identification of overhunting in the archaeological record has been a significant focus of research in recent years. This paper presents the results of simulation modeling of ungulate populations under human hunting pressure, demonstrating that sex ratio data for the killed prey are essential to the identification of overhunting from changes in prey age structure.

**Beck, Charlotte (Hamilton College) and George T. Jones (Hamilton College)**

[44] *A Case of Extinction in Intermountain Paleoindian Lithic Technology*

Evolutionary accounts of technology tend to focus on innovation and transmission processes as well as the selection conditions favoring the persistence of variant forms over time. At the other end of the spectrum, of course, is extinction. Extinction can be viewed as the flip-side of selection, that is, the success of one technology at the expense of another. Here we examine the process of extinction with an example from the Paleoindian period in the Intermontane West, the selection conditions that favored the persistence of biface technology at the expense of blade production, resulting in the extinction of the latter.

**Beck, Margaret (University of Iowa), Danielle Schwarz (Archaeometry Laboratory, University of Missouri Research Reactor) and Michael Glascock (Archaeometry Laboratory, University of Missouri Research Reactor)**

[18] *Interaction and Migration in the Sonoran Desert: A View from Ceramic Compositional Analysis*

This project examines the relationships between sedentary Hohokam agriculturalists and more mobile Lowland Patayan groups in southern Arizona, focusing on their overlapping territories near the Hohokam western frontier and the movements by Patayan groups after A.D. 1000 into traditional Hohokam territory to the east. The ceramic sample includes 350 Patayan and Hohokam sherds from a broad geographic area in the Papaguería and from the Hohokam site of Las Colinas. Results from neutron activation analysis are compared here with oxidation analysis and other ceramic data in order to reconstruct patterns of regional exchange and migration.

**Beck, Margaret E. [10]** see *Schwarz, Danielle K. H.*

**Beck, Robin [171]** see *Rodning, Christopher B.*

**Begley, Christopher (Transylvania University)**

[117] *Internal Dynamics and External Connections along the Mosquito Coast of Honduras*

This paper explores the relationship between the Mosquito Coast of Honduras and their neighbors during the Classic and Postclassic, and examines the utilization of these external

connections by local elites. Patterns of material culture suggest a dynamic and complex relationship with both Mesoamerica and Lower Central America. Here, a strong cultural affiliation with Lower Central America is demonstrated, although often obscured by a strong Mesoamerican veneer manifested in elite goods and architecture. Using data from projects in Honduras and observations from elsewhere in Lower Central America, the cultural affiliation of the Mosquito Coast populations and elite power strategies are discussed.

**Beier, Zachary (Syracuse University)**

[150] *Within the Walls: Testing the Boundaries of Contested Identities at Fort Shirley, Dominica, 1760-1850*

Military sites played an integral part in the defense and maintenance of Caribbean colonial society. Fort Shirley, located on the Caribbean island of Dominica, was occupied by the British between 1765 and 1853. In 1795, the British began conscripting enslaved Africans into the West Indies Regiment to mitigate the high rate of morbidity and mortality among European soldiers. This presentation provides an overview of the archaeological work conducted thus far at Fort Shirley and summarizes data reflecting the daily practice of these distinct groups in relation to larger processes of identity formation in Caribbean colonial society.

**Belardi, Juan (Univ Nac de la Patagonia Austl), Diego Rindel (INAPL - CONICET) and Tirso Javier Bourlot (INAPL - CONICET)**

[139] *More than it was expected: preservational differences of epiphyseal ends and diaphysis of guanaco (Lama guanicoe) long bones in Southern Patagonia*

There is a trend in the archaeofaunas of open air sites from Southern Patagonia that shows long bones epiphyseal ends outnumbering diaphysis. This runs counter expectations built on bone structural density obtained from several scan sites. We propose that epiphyseal ends / diaphysis dissimilar frequencies stands from taphonomic preservational differences related with long bone structure, weathering (abrasion) at open air sites (mostly related with sandy substrates) in a windy environment, and the less destructive behavior of Patagonian carnivores. Archaeological implications are used in a comparative perspective in order to evaluate the relevance of taphonomic-archaeological models constructed in other different settings.

**Belisle, Veronique (University Of Michigan) and Vicentina Galiano Blanco (Independent Archaeologist, Cusco, Peru)**

[45] *Villagers of Ak'awillay, Cusco and their Limited Participation in the Wari State*

In the Cusco region of southern Peru, the Wari state established two clusters of settlements during the Middle Horizon, Pikillaqta and the Huaru Archaeological Complex. Previous research on Middle Horizon Cusco focused on these large Wari centers whose elites purportedly controlled the region, its resources, and its population. New data from the village of Ak'awillay suggest that local people knew about the presence of the Wari in the area but their interaction with them was minimal. Local life went on virtually unchanged and villagers from Ak'awillay continued to exchange goods with neighboring polities.

**Belknap, Lori, Julieann Van Nest (New York State Museum), Kathleen Ehrhardt (Illinois State Museum), Kathryn Parker (Great Lakes Ecosystem) and Lucretia Kelly (Washington University)**

[53] *Craft Production at Cahokia: Mound 34's Copper Workshop*

With support from the Cahokia Mounds Museum Society and the National Geographic Society, solid evidence for the in-situ working of native copper has been explored beneath Cahokia's Mound 34. Fragments of hammered copper, a considerable amount of copper detritus, along with tools and features associated with copper fabrication have been located, mapped and recovered. This location contributes to the understanding of the possible production of embossed copper plates characteristic of the Southeastern Ceremonial Complex. This poster presentation is a summary of the most recent work on the copper workshop at Mound 34.

**Bell, Colleen A. [88] see Barket, Theresa**

**Bell, Ellen (California State University, Stanislaus)**

[169] *From the Heights of the Early Acropolis to the Valleys of the Hinterland: Administrative Strategies in the Copan Kingdom*

Dr. Robert J. Sharer's pioneering work to bring Copan's first kings to light revolutionized our understanding of royal authority and administrative strategies in the founding events and early years of dynastic rule at a Classic period Maya center. This foundation has inspired researchers to tease apart the intricacies of Classic Maya kingship to produce increasingly detailed and

nuanced models of political organization in Mesoamerica. This paper examines the foundations of royal power in the Early Copan Acropolis and royal administrative strategies throughout the Late Classic Copan kingdom, highlighting Bob Sharer's pivotal role in urging forward our investigation of these questions.

[114] *Discussant*

**Bellorado, Benjamin (Crow Canyon Arch. Center) and Kirk Anderson (Northern Arizona University)**

[144] *Roving Climatic Marginality and Population Movement: Farming Opportunities and Constraints in the Middle and Upper San Juan Region*

Maize agriculture is dependent on two primary environmental factors, water availability and temperature, commonly discussed as frost-free growing season length. Throughout the Middle and Upper San Juan region, climatic variability directly influenced crop production which, in turn, may have caused societal stress, thereby dramatically influencing microregional migrations during the Pueblo Period. This paper demonstrates how fluctuations in dendroclimatically reconstructed precipitation patterns, interlaced with macro regional temperature fluctuations, both "pushed" and "pulled" human settlements through time. We discuss how the interplay of agricultural practices and climate shaped the character of human settlement along the Animas River compared to the larger region.

[144] *First Chair*

**Bendremer, Jeffrey (Mohegan Tribe), Elaine Thomas (Mohegan Tribe), Faith Davison (Mohegan Tribe) and Stephanie Fielding (Mohegan Tribe)**

[173] *Yo Nikun (This is my Home): Vernacular Architecture and Changing Indigenous Domestic Spaces on the Mohegan Reservation*

There have been a number of domestic architectural styles employed by the Mohegans during the long history of their reservation (established 1671) in Uncasville, CT. We will explore what is known about these vernacular architectural forms from archaeological, archival and linguistic sources to frame and elucidate historic indigenous spaces and their cultural contexts and meanings. Special consideration will be given to Mohegan perspectives and interpretations of the available data and ways in which archaeologists and Native people can work together to investigate, understand and appreciate the lives of tribal ancestors in ways that are both respectful and beneficial.

**Bennett, Rochelle [43] see Spurr, Kimberly**

**Benz, Emily (Washington State Univ.), John Jones (Washington State University) and Pat Farrell (University of Minnesota, Duluth)**

[150] *Human Occupation and Environmental Change on Grenada: The Pollen Evidence*

Analysis of a recently-collected core from Meadow Beach in northeast Grenada reveals details of past environmental conditions on this poorly studied island. Well-preserved fossil pollen reveals changes in vegetation assemblages indicating increased salinization due to sea level rise. Fluctuations in charcoal concentrations hint at episodes of human occupation in the site area, possibly corroborated by increases in economic plant taxons. A detailed geoarchaeological analysis and radiocarbon dates provide a temporal framework for these baseline data. Future analysis of an additional 8.5meter core collected north of this site will help to illuminate the archaeological history of this important island.

**Bercovici, Jessica (CSUN)**

[36] *The Faceless People: A Study of Portable Gender Specific Figurines found at the Middle Preclassic site of La Blanca, Guatemala*

This paper will examine gender specific ceramic figurines from La Blanca, Guatemala for indication of ritual and domestic significance among the Middle Preclassic of the Mayan Pacific Lowlands in regards to when and where they appear. This will be a two part analysis: (1) A literary review concerning the characterization and function of similar figurines from contemporary sites. (2) A comparison of portable gender specific figurines from La Blanca with portable gender specific figurines of contemporary Mesoamerican sites to establish use and common iconographic themes.

**Berdan, Frances (California State University)**

[166] *Featherworking in the Provinces: a dispersed luxury craft under Aztec hegemony*

Elizabeth Brumfiel has made innovative contributions to the scholarly understanding of specialization in Late Postclassic central Mexico. In that spirit, this paper examines geographic,

political, practical and stylistic dimensions of featherworking. While this was a luxury craft best documented in Basin of Mexico urban centers, fancy feathered objects were also produced in outlying regions of the Aztec empire. Broad patterns of production, distribution and use of feathered objects are revealed by focusing on featherworking activities in the "provinces" where this craft built on long-standing traditions, was sustained by vigorous economic and political forces, and responded to imperially imposed requirements.

[38] *Discussant*

**Berg, Caryn (SWCA), Anthony Lopez (SWCA Environmental Consultants), and Karen Reed (SWCA Environmental Consultants)**

[34] *Projectile Points as Markers for Potential Economic and Social Networks in Western Colorado*

Projectile points identified at sites and isolated finds in the Piceance Basin of western Colorado indicate the use of this area from the Early Archaic through the Late Prehistoric periods. Interestingly, a variety of iconologically different projectile points are found across the project area. These may signal larger economic or social networks among hunter-gatherer populations, and may suggest use of this area by multiple networks of people. This poster uses typological information and obsidian source data to elucidate these networks.

**Berg, Caryn [34] see Hjermstad, Alisa; [34] see Reed, Karen; [34] see Schwendler, Rebecca H.**

**Bergh, Sarah (University of Georgia)**

[46] *Raiders of the Lost Garden: Stable Isotope Analysis on Deer and Raccoon Bones as a Proxy for Landscape Use*

Despite growing awareness of changing aboriginal landscapes on St. Catherines Island, Georgia, horticulture's role in the subsistence strategy and its impact on the landscape is still not well understood. This study uses stable carbon and nitrogen analyses of deer and raccoon bone to address this question. Studies on mammal bone elsewhere have had varying degrees of success; this study uses a sample size of 25 specimens from known pre-horticultural and post-horticultural periods to test its applicability on the island. Assuming these animals were garden raiders, the isotopic signatures in their bones reflects the timing of maize adoption and expansion.

**Bergin, Sean (Arizona State University) and Alexandra E. Miller (Arizona State University)**

[96] *Paleoclimate Modeling and the Drivers of Early Neolithic Expansion in Mediterranean Europe* During the sixth millennium BC agriculture spread rapidly along the Mediterranean coasts of Italy, France and Spain. Current explanations for this rapid expansion highlight the importance of population movement as a driving factor in this socio-ecological expansion, but the drivers for this dramatic population movement remain unclear. New techniques for macrophysical archaeoclimatic modeling provide detailed information on weather patterns during the Holocene in the western Mediterranean. This paper examines relationships between changing paleoclimatic conditions along the Mediterranean coast of Europe and the swift dissemination of Neolithic agriculture and lifeways across this region.

**Bergstrom, Jorgen (GEL Geophysics, LLC)**

[134] *Computer Assisted Radar Tomography for Geophysical Investigations of Archaeological Sites*

Computer Assisted Radar Tomography (CART) is a relatively new system which uses multiple ground penetrating radar (GPR) antenna pairs to conduct fast and economical 3-D subsurface investigations. Although the system was initially designed for mapping underground utilities, we have found it exceptionally useful for characterizing archeological sites. Using CART, the subsurface images produced are so clear and unambiguous that in many cases they can easily be interpreted by archeologists themselves. This paper will include case studies showing CART investigations at archeologically sensitive sites such as graveyards, plantations, and historic settlements.

**Berkson, Alice (University of Illinois)**

[88] *Archaeology and Natural Resource Volunteer Programs Integrating Cultural Resources with Environmental Stewardship*

As outlined in a December, 2008 SAA Archaeological Record article, adult volunteer programs nationwide are represented in the Alliance of Natural Resource Outreach and Service Programs (ANROSP). Although there are at least 29 states with such programs, only a quarter of them include archaeology training and ongoing programs. Successful examples in Illinois, Texas, Arkansas and other states should inspire others to seek out these environmentalists and

encourage them to include archaeology. Professional archaeologists can work with avocational groups to bring archaeology to a new audience, those who are active in local environmental stewardship and education.

**Berman, Mary Jane (Center for American and World Cultures, Miami Univ) and Kevin Johnston (Student, Miami University)**

[150] *Early Palmetto Ware- Lucayan Innovators?*

Palmetto ware is a distinctive Lucayan pottery that draws on Ostionan Ostionoid and Meillacan Meillacoid decorative treatments, which reflect its cultural associations with homeland communities of northern Cuba and northern Hispaniola. Many Palmetto ware physical attributes resemble these contemporaneous types, but others, such as its shell temper sets it apart. Using optical microscopy, we examine a sample of thin-sectioned Palmetto ware sherds from an early open air residential site on San Salvador, Bahamas, to determine whether the shell temper comes from purposefully crushed shell, beach strand deposits, or clay matrix. We investigate Lucayan agency through the lens of their ceramics: did the potters mimic non-Lucayan pottery and try to reproduce it in a new environment or were they active innovators and why?

**Berna, Francesco [102] see Murata, Satoru**

**Bernardini, Wesley (University of Redlands)**

[61] *Frequency, Time Span, Scale: Lessons from Ancestral Hopi Migrations*

With its high resolution chronological and spatial data, the American Southwest is a unique laboratory for studying migration and identity. The movements of ancestral Hopi groups, which are recorded in both the material record and in oral tradition, are among the most well documented of Southwestern migrations. Using the Hopi case study, this paper discusses generalizable lessons about migration and identity along three primary axes: frequency; time span; and scale. These lessons may be used to inform migration research in areas with coarser chronological and/or spatial data.

**Bernatz, Michele (SUNY Fredonia)**

[6] *God L: Refining the Standard*

The Maya God L is a cigar-smoking, underworld entity, a patron of warriors and traders. This generalized description of an enigmatic persona is the norm in literature on ancient Mesoamerica. Fortunately, as the complexities of Maya religion are revealed through intensified study of material culture, standard discourse on the cast of performers can be refined. This paper introduces current research on the character of God L as delimited by the more specific context of location and timeframe. Closer scrutiny of sacred iconography and narrative reveals new patterns of meaning and surprising inconsistencies that question an overly-simplistic and familiar dialogue.

**Berrey, Charles A. (University of Pittsburgh)**

[65] *Patterns of Community Dynamics through the Development of Early Complex Society*

Regional-scale studies of different social trajectories are beginning to reveal a considerable degree of variation in the way that prehistoric societies developed throughout Lower Central America and Northern South America. As it is through means of human interaction within communities that the forces behind such development are carried out, investigation into the changing patterns of community-scale dynamics provides a complimentary perspective from which to understand these long-term processes of social change. This paper pursues such investigation by way of comparative analysis, examining three separate trajectories of community-scale development, emphasizing aspects of demographic composition and domestic activity within the community.

**Berry, Kimberly (Boston University)**

[158] *Pulltrouser Swamp Revisited: A Synthetic Analysis of Maya Behavior in an Ancient Settlement (K'axob) and its Adjoining Wetland*

This paper explores archaeological and geoarchaeological evidence for wetland exploitation by the residents of K'axob and describes some adaptive mechanisms employed by them to combat changing environmental conditions. Agricultural success—both on the mainland and eventually on wetland island fields—supported the longevity of the settlement despite perturbations in both the natural and sociopolitical environments during the Middle Preclassic through Postclassic periods. It is argued here that behavioral interpretations of wetland use are strengthened by analyzing data specific to stratigraphic excavations conducted in the settlement proper in conjunction with those found in island fields, and in the intervening terrain.



**Berryman, Carrie (Vanderbilt University), Deborah E. Blom (University of Vermont), Kelley J. Knudson (Arizona State University), Sara K. Simon (University of North Carolina) and Shannon L. Wilson (University of Vermont)**

[12] *A Multidisciplinary Approach to Human Skeletal Analysis at Mollo Kontu, Tiwanaku (Bolivia)*

In the spirit of the collaborative nature of the Proyecto Jach'a Marka, this paper brings together the work of multiple bioarchaeologists to advance our knowledge of Tiwanaku urbanism and social identity. We report on human skeletal data from two distinct mortuary areas in the Mollo Kontu sector of the site of Tiwanaku (a residential area and the mound) and compare them with those from our other ongoing studies in the Tiwanaku core and diaspora. Here, we focus on the utility of demography, paleopathology, and skeletal indicators of activity/labor, diet, identity and residence patterns in elucidating diversity in Tiwanaku society.

**Beserra Coelho, Elizabeth [139] see Politis, Gustavo G**

**Bestock, Laurel (Brown University)**

[187] *Early Egyptian Writing in Context*

This paper examines how the mortuary contexts of early Egyptian writing both inform and distort our understanding of script usage and the role it played in the developing Egyptian state. Writing in Egypt emerged in conjunction with the growth of a centralized political system based on the king. From the beginning, writing served dual purposes of administrative control and display. Although the contexts and subject matter of early inscriptions is limited, it is clear that writing was restricted to use by the king and the elite. As such, writing both was defined by and helped to define this group.

**Bettinger, Robert (University of California-Davis), Christopher Morgan (Utah State University) and Loukas Barton (National Park Service)**

[44] *The North China Neolithic*

The microblade technology that is the hallmark of the North China Microlithic is curiously absent from the archaeological assemblages of its direct descendants, the various cultural complexes that together represent North China's early millet farming revolution. Recent excavations at the early millet farming site of Dadiwan, in the western Loess Plateau, produced this long-missing microblade technology in miniature (microblade cores averaging less than 11 mm tall, microblades less than 9 mm long), its size reflecting the scarcity of fine-grained toolstone in the Loess Plateau. That the technology developed elsewhere is clear, its functions are not.

**Bettinger, Robert [44] see Barton, Loukas W.**

**Betts, Alison V.G. [145] see Brite, Elizabeth B.**

**Betts, Colin (Luther College)**

[82] *A Cartographic Perspective on Protohistoric Ethnicity in the Upper Midwest*

The biological and political dimensions of European contact resulted in a time-transgressive decline in cultural diversity that dramatically transformed the cultural landscape of North America. The initial occurrence of these factors prior to direct, sustained contact has resulted in an incomplete understanding of their impact on Upper Midwestern contexts. Systematic examination of contact period maps provides an important window on the cultural processes at work in the early historic period, revealing a previously unrecognized amount of ethnic complexity. This analysis provides a new perspective for critically examining the manner in which ethnicity is projected onto the archaeological record.

**Bever, Michael R. [49] see Caffrey, Karen**

**Bey, George (Millsaps College)**

[154] *From Founders to Fat Farmers: The Evolution of an Urban Landscape in the Puuc Hills of Yucatán*

It is now recognized that the evolution of Maya polities took place over at least a 1700 year period in the Puuc region. Data from Kiuic provide information on all stages of polity formation allowing a consideration of how basic institutions and practices developed and were modified. Analysis of one elite complex shows how a founding family managed authority and how their efforts were eventually memorialized. Evidence from the edges of the site suggests although "ruralization" began in the initial stages of polity formation, it established its primary form in the later history of the polity.

**Bey, Tiara M. [33]** *see McArdle, Germaine F.*

**Beyer, Jennifer [31]** *see Chan, Rebecca C.*

**Bevin, Amanuel (Stony Brook University, Dept of Anthropology) and Daniella E. Bar-Yosef Mayer (The Leon Recanati Institute for Maritime Studies, and Department of Maritime Civilizations University of Haifa)**

[3] *Later Stone Age settlements on the Red Sea Coast of Eritrea: Chronology, technology and subsistence*

This paper discusses technological variability, subsistence strategies and chronological placement of recently investigated Late Stone Age sites from the Red Sea Coast of Eritrea. Backed tools and prismatic blades characterize the lithic assemblages at the LSA sites. Abundant mollusk shells were also recovered in association with lithic artifacts suggesting human exploitation of marine resources. The excavated sites have produced radiometric dates ranging between 5000 and 8000 years BP. These dates coincide with the early Mid-Holocene intermittent dry periods. Such adverse scenarios may have triggered population diversification and periodic migrations within the Horn of Africa and beyond. One possible explanation for the existence of early to Mid-Holocene settlements along the Eritrean coast is that humans were attracted to coastal habitats during the dry periods as resources in the interior of the Danakil depression deteriorated. Human coastal settlements have been widely documented for this time period from various regions of Africa and Eurasia. The results of this project bring new data on Holocene coastal settlements in the Horn of Africa.

**Bezy, Philippe**

[6] *Marine Origins of Maya Shell Trumpets*

The act of naming renders historically remote artifacts manageable within the framework of research. It also circumscribes the perception of the object or the concept to which the name refers. Over time, accepted interpretations can stifle further research. Precolumbian Maya "conch trumpets" offer such an example. The Maya made trumpets from the shells of six different families of mollusks. A re-examination of the instrument, including biological data, offers the opportunity to improve our understanding of this Maya instrument. A focus on biological data allows for a "loosening" of the current historiographic "straitjacket" that "conch trumpets" embodies.

**Biehl, Peter (SUNY Buffalo) and Eva Rosenstock (Free University Berlin/Germany)**

[95] *And a River Runs Through...? Rethinking the transition between the Neolithic and Chalcolithic in Çatalhöyük/Turkey*

The paper will scrutinize the process of cultural, social, economic and symbolic transition between the Neolithic and the Chalcolithic in Central Anatolia as revealed at the Çatalhöyük East and Çatalhöyük West Mounds. It will situate the transition in the palaeo-environmental changes in the Konya plain and will present a preliminary interpretation of the social changes and continuities between the East and West Mound. The paper will also re-evaluate these changes within a framework of agency and materiality theories and contextualize the events at Çatalhöyük at the turn of the 7th-6th millennium cal BC with other sites in Central Anatolia.

**Bierbrauer, Sandra [53]** *see Collins, Antoinette L.*

**Billeck, William (Smithsonian Institution)**

[29] *Traces of Coronado: Spanish Glass Beads in the Southwest and Plains*

Glass beads that derive from pre-1700 Spanish contact with Southwestern and Plains Native Americans are rarely identified at archaeological sites. Attributes of pre-1700 glass bead assemblages from New Mexico, Kansas, and Oklahoma are evaluated to assess whether the beads are from the Coronado Expedition of 1540-1542 or represent later Spanish contact. Because of their temporal implications, Nueva Cadiz and chevron beads are indicators of contact with the Coronado Expedition, whereas monochrome blue drawn beads appear to be typical of later Spanish contact.

**Hillman, Brian (UNC & MOCHE, Inc), Jennifer Ringberg (UNC-Chapel Hill) and Jesus Briceno (INC-Peru)**

[121] *House of the Living, House of the Dead: Excavation of the Paramount Noble Residence at Cerro Leon on the North Coast of Peru*

Analysis of room function and the spatial organization of Compound 1 at Cerro Leon revealed that the residence of the compound were ethnically distinct from contemporary coastal people. In

addition, Compound 1 was the largest residence at Cerro Leon and was probably occupied by the paramount ruling family of the Cerro Leon polity. The compound was divided into three spheres of interaction: a private residential area consisting of patios, kitchens, and storage rooms, a mortuary area associated with communal food preparation, and an area of large terraces for public performances.

**Billman, Brian [151]** *see Boswell, Alicia*; [121] *see Quist, Juliana*

**Binning, Jeanne (California Department of Transportation), Alan P. Garfinkel (California Department of Transportation), Craig E. Skinner (Northwest Research Obsidian Studies Laboratory) and Jennifer J. Thatcher (Northwest Research Obsidian Studies Laboratory)**

[88] *Obsidian Hydration, Cut Sample Selection, and Technological Aspects of Debitage*  
Technological debitage analysis can be an aid in assessing discard context, as well as overall site integrity. Related to this is the well-known use of obsidian hydration to identify scavenging and reuse behaviors. Obsidian hydration cut locations are often determined in the obsidian lab; for the most part, the archaeologist soliciting the hydration assessment does not select the specific cut locations. By identifying features on the artifact that can be attributed to particular technological techniques or methods and acquiring hydration measurements from these locations, transformational processes and prehistoric behavior are better elicited. An example from an archaeological site located in the Southern San Joaquin Valley of California is presented.

**Bintliff, John (Leiden University)**

[113] *Territoriality and Politics in the Prehistoric and Classical Aegean*  
Classicists are familiar with boundaries from texts and boundary markers. Disputes show the 'active defence' of public and private territory. Mostly this evidence comes from the introverted, bellicose Classical city states, where awareness of land boundaries reflects overpopulation and competitive endogamous 'corporate communities' (Dyson-Hudson and Smith 1978, Bintliff 1994, 1999). In the preceding Early Iron Age, or the farming prehistory of the Aegean is there evidence for territoriality? The answer will vary by period, for insightful reasons. Moving forward to the Roman Aegean dramatic changes point to different attitudes to territory, perhaps comparable to modern globalization effects.

**Binzen, Timothy**

[153] *More to the Point: Case Studies of Brewerton and Orient Projectile Production from Eastern Massachusetts*

In the Northeast, Brewerton and Orient projectile points are hallmarks of the Late Archaic and Terminal Archaic periods. Research at two sites in the Concord and Shawsheen river drainages shows these points being made from locally available material. The Boulder Trail Site produced Brewerton points, scrapers, and chipping debris of one variety of rhyolite. The Shawsheen River Site yielded an assemblage of rhyolite debitage and an Orient point that evidently was broken and discarded during the manufacturing process. The implications of local manifestations of regional styles are explored.

**Birch, Jennifer (McMaster University) and Andrew Clish (Archaeological Services Inc.)**

[9] *Unraveling the Occupational History of Village Communities: A Unique Iroquoian Example*  
This paper examines the methods used to detect episodes of building and rebuilding at the Mantle site, a sixteenth century Wendat (Huron) village in Ontario, the terminal site in a sequence that represents approximately 200 years of community relocation and coalescence. Covering nine acres and containing over ninety longhouses, it is one of the most complex Iroquoian villages ever excavated. The superimposition of houses, variable durations of occupation and excavation methods all provided challenges to the analysis, but the results show how the occupational history of the site provides a better understanding of intra-site dynamics and processes of community coalescence.

**Bird, Douglas W. [145]** *see Coddling, Brian F.*

**Bishop, Nichole (UNF)**

[142] *The Black Drink: It's Not the Caffeine*

The Black Drink was a tea brewed by many Native American groups of the U.S. Southeast. One of the most interesting, and notorious, characteristics of the Black Drink is its emetic effect. Included in this paper are the summation of methods and results of chemical analysis used to determine the caffeine content of the Black Drink that dispels the popular belief that caffeine is the agent responsible for emetic effects. Finally, possible alternative explanations for the emetic effects associated with the Black Drink are discussed.

**Bishop, Ronald (Smithsonian Institution), Erin L. Sears (University of Kentucky and the Smithsonian Institution) and M. James Blackman (Smithsonian Institution)**

[76] *Toward a Common Pool: INAA research in Mesoamerica*

The occasion of this symposium acknowledges that INAA has contributed and continues to contribute something useful to archaeology. Today's existing facilities tend to address fairly different research objectives, involving long-term, student and contractual investigations. However, they maintain a commitment to reasonably high precision data and have given close attention to the need to a shared platform of reference so that data can be exchanged among them. This paper examines examples of multiple laboratory Mesoamerican research and the archaeological findings that would have been difficult to arrive at in a context of laboratory competition.

**Bishop, Ronald [149]** *see Danien, Elin C.*; **[58]** *see Castillo, Victor J.*

**Biskowski, Martin (CSU Sacramento)**

[166] *Contexts for Decision-Making in Grinding Tool Use*

Researchers commonly embrace superficial explanations of the presence of staple grinding tools in archaeological sites. This lack of depth is an understandable response to the sparseness of these artifacts and the consequent difficulties developing hard evidence of their associations with different temporal and social contexts. Nonetheless, archaeologists should be aware that the use of these artifacts often was predicated upon social, economic, and political factors which extended far beyond the household and community. This paper explores some of the contexts which influenced past grinding tool use and considers their implications for archaeological research.

**Blackman, M. James [76]** *see Bishop, Ronald L.*; **[58]** *see Castillo, Victor J.*

**Blackmore, Chelsea (UC Berkeley) and Shankari Patel (UC Riverside)**

[68] *Persistence or Resistance? Dissecting Colonial Yukatek Maya Religion and Social Identity Formation*

In discussions of colonial Yukatek Maya religion, scholars rarely deal with ritual practice in terms of class, gender, or ethnicity. Colonial period ritual traditions are seen as either direct descendants of Classic Maya culture or as indigenous hybrids of Christianity, rather than unique social formations. Just as society was restructured, so were the religious institutions of the region. In this way, religion became a tool of state ideology but also a space for indigenous resistance. In this paper, we will examine religious traditions as in-situ formations, framed not only by Spanish colonization but by indigenous practices of revitalization.

**Blackwell, Bonnie (Williams College), Andres Montoya (RFK Science Research Institute), Anne R. Skinner (Williams College) and Joel I.B. Blickstein (RFK Science Research Institute)**

[175] *Answering Key Questions with Geoarchaeology: ESR's Ability to Determine the Site Age*

Electron spin resonance dating (ESR) can determine the age for mammalian tooth enamel, terrestrial and marine mollusc shells, corals, foraminifera, and barnacles with 2-5% accuracy in the time range from 3 Ma to 10 ka. Since each of these materials occurs in archaeological contexts directly associated with artefacts and hominid remains, Paleolithic sites and those containing hominid remains ranging from Australopithecines to Neanderthals can be dated. Examples from several European Middle Paleolithic and Neanderthal cave sites and African ESA, MSA, and LSA open-air and cave sites demonstrate the method's utility across a broad time and contextual range.

**Blair, Elliot (UC Berkeley)**

[46] *Exploring Mortuary Diversity at Mission Santa Catalina de Guale*

Mortuary patterning at Spanish missions in La Florida is characterized by considerable diversity – both within and between missions – and there has been much speculation as to explanations for this variety. Much of this speculation, however, has tended towards generalization, and few attempts have been made to explore fine-grained, diachronic, explanations for mortuary diversity. In this paper I will examine the mortuary variability at Mission Santa Catalina de Guale (Georgia) – paying particular attention to small-scale temporal and spatial distinctions in quantity and variety of grave goods and reconsidering the relationship between funerary treatment and sacred and secular status in Spanish Florida.

**Blair, Susan (University of New Brunswick)**

[9] *A contribution to the timing and distribution of steatite in eastern North America*

Steatite vessels are widely considered to be important index fossils in the transition in eastern North America from Archaic to Woodland, and manifestations of the changes that characterize it. In the Northeast, steatite technology has been interpreted as spreading from south to north during the Terminal Archaic period, as part of the Susquehanna Tradition, and, thus, attention has focused on its accurate dating. In this paper, we present new information, interpretations of steatite from the northern margins its distribution, and explore implications for our understanding of the timing of its use.

[9] *see Gorman, Elizabeth N.*

**Blaisdell-Sloan, Kira [117] *see Sheptak, Rus*****Blake, Jerrell (Paciulli, Simmons & Assoc)**

[160] *Positions of the Confederate 2nd Corps, 1862/1863 at Fort A. P. Hill, Caroline County, Virginia*

Annad's map of the Battle of Fredericksburg depicts Stonewall Jackson's reserve divisions on December 13, 1862, which corresponds with Site 44CE505. The divisions were placed south of Port Royal to protect against a Federal assault below Fredericksburg, and be in position to re-enforce Longstreet. Before the engagement at Fredericksburg, much was made about Port Royal's strategic importance. Its advantageous topography and proximity to supply lines made it a candidate for attack. Efforts focused on primary research and intensive metal detecting shed new insights into the Confederate 2nd Corps winter encampment at Fort A. P. Hill in Caroline County, Virginia.

**Blake, Michael (University of British Columbia) [7] *Discussant*****Blancas, Jorge (Inst. Inv. Antropológicas), Agustín Ortiz Butrón (Instituto de Investigaciones Antropológicas, UNAM) and Luis Barba (Instituto de Investigaciones Antropológicas, UNAM)**

[148] *Geophysical Prospection And Archaeological Excavations In Tres Zapotes, Veracruz, Mexico*

The joint research project between the Anthropology Department of the University of Kentucky and Instituto de Investigaciones Antropológicas, UNAM included the use of three geophysical prospection techniques to detect anomalies in ceremonial areas of the archaeological site of Tres Zapotes and their later verification through excavation. One of the goals of the joint project was to detect the presence of monumental sculptures and some other buried archaeological structures. The combined application of magnetic gradient, georadar and electrical resistivity covered 38,000 m<sup>2</sup> and the anomalies found suggested the presence of large stones, kilns, tombs and domestic structures that were excavated.

**Blancas, Jorge [38] *see Ortiz, Agustín*****Blankenship, Sarah (University of Tennessee), Alan Cressler (USGS) and Jan F. Simek (University of Tennessee)**

[67] *Four-Legged Denizens of the Underground*

Quadruped effigies take a variety of forms in Mississippian art of the North American eastern woodlands, often seen as "monstrous" or "supernatural" when found on engravings or pottery from this time period. In the prehistoric cave art sites now known in the region, quadruped images seem more mundane. While a number of animal species, both real and imagined, may be represented in cave art, we believe that dogs are a common subject. In this paper, possible dog effigies from caves are illustrated, and relations between dogs and humans and the underworld are discussed.

**Blankenship, Sarah A. [84] *see Herrmann, Nicholas P.*****Blanton, Dennis (Fernbank Museum)**

[171] *The Climate Factor in La Florida During the Sixteenth and Seventeenth Centuries*

Estimations of past climate conditions in the southeastern United States are much improved by development of complementary proxy data sources such as tree rings, coral growth bands, and documentary records. The implications of reconstructed climate for human affairs in Spanish La Florida are usually less obvious. Following a description of general climate conditions between AD 1500 – 1700, case studies highlighting specific cause-effect scenarios will be offered, and

concluding comments will consider options for enhancing our evaluation of the culture-climate connection in early colonial contexts.

**Blanton, Richard [24]** *see Fargher, Lane F.*

**Blickstein, Joel I.B. [175]** *see Blackwell, Bonnie A. B.*

**Bliege Bird, Rebecca [145]** *see Codding, Brian F.*

**Blinman, Eric (NM Archaeology), Cynthia Herhahn (UNM Office of Contract Archaeology), Kari Schleher (UNM Anthropology) and Tom Dickerson (Santa Fe Artist)**  
[13] *Analytic and experimental approaches to understanding Rio Grande glaze paint technology as an artistic process*

Nearly 100 years of Rio Grande glaze paint analyses have provided a wealth of information on the composition of the finished glaze, raw materials, and their variation in time and space. Relatively little progress has been made in understanding glaze technology as an artistic process. Recent discoveries of an AD 1500 unfired glaze pigment sample and probable firing features have rekindled interest in glaze paint as a tradition and art form. We offer a model of glaze paint technology built on analytic data and 40 years of experience in glaze replication firing experiments.

**Blitz, John (University of Alabama)**

[17] *Scales of Value in the Prehistoric Eastern Woodlands: Polymorphs, Isomorphs, Hypermorphs, Atomorphs.*

The concept of materiality is useful for bridging the gap between structure and agency. But materiality presupposes scales of value. How was value created in past societies? In addition to scarcity and labor, polymorphs, isomorphs, hypermorphs, and atomorphs are forms of qualitative artifact variation basic to scales of value. Context and distribution indicate that these forms of qualitative artifact variation served as powerful metaphors that indexed and rationalized qualitative social distinctions, thus creating scales of value among material things and the people who possessed them. Various prehistoric examples of artifact polymorphs, isomorphs, hypermorphs, and atomorphs are identified and discussed.

[42] *see Thompson, Claire Elizabeth*

**Blom, Deborah (University of Vermont), Maria C. Bruno (Washington University in St. Louis) and Nicole C. Couture (McGill University)**

[81] *Skirting Around the City: "Being Tiwanaku" at Mollo Kontu*

Located directly south of the large Akapana pyramid, the "barrio" of Mollo Kontu in the city of Tiwanaku presents an important perspective into the dynamics of Tiwanaku social identity. Mollo Kontu is specifically suited to this type of inquiry because of its unique juxtaposition of monumental, domestic, and mortuary areas. This paper explores the significance of using architecture, mortuary analysis, human osteology, and paleoethnobotany for examining Tiwanaku and possibly "other" identities that were represented at Mollo Kontu. We report on differentiation within the barrio and consider the implications of our findings along side those from the Tiwanaku core and diaspora.

[12] *First Chair [12] Second Organizer*

**Blom, Deborah [12]** *see Pokines, James T.;* [12] *see Couture, Nicole C.;* [12] *see Berryman, Carrie Anne*

**Blong, John [145]** *see Graf, Kelly E.*

**Blouet, Helen (Syracuse University)**

[150] *Fields of Change and Continuity in Afro-St. Johnian Burial Sites and Landscapes*

From the eighteenth to early twentieth centuries, St. John in the Virgin Islands formed part of the Danish West Indies. At the colony's onset, Europeans dominated land ownership and controlled much of the island's profitable resources, including enslaved laborers. The laborers faced racism and inequality from their captors yet managed to survive and create shared cultures and communities. This paper presents historical and archaeological findings on the landscape of burial sites within shared Afro-St. Johnian cultures and communities and, using Geographic Information Systems, highlights the sites' transformations and continuities in relation to fluctuating economic, religious, and social interactions.

**Boada, Ana (University of Pittsburgh)**

[65] *Social and Geographical Landscapes in the Formation of the Bogotá Chiefdom, Colombia*  
The purpose of this article is to document the development of the Bogotá paramount chiefdom through analysis of its settlement pattern. Spanish ethno-historical documentation from the 16th and 17th centuries identified thirteen "partes" (parts, a kind of social unit) that comprised the Bogotá chiefdom. I will use these ethno-historical sources to complement archaeological evidence gathered during a systematic archaeological regional surface survey. The resulting settlement pattern analysis will show whether these partes constituted discrete settlements. From this, I will describe the nature of the partes, the rules that governed their spatial arrangement, and how the partes interacted with each other. These conclusions will then be compared and contrasted with European descriptions of Muisca social and political organization encountered in the Sabana de Bogotá during the 16th century.

**Bobik, Aaron [31]** see *Aragon, Leslie*

**Bocinsky, R. Kyle (Washington State Univ.)**

[88] *Understanding and modeling turkey domestication in the American Southwest: A preliminary simulation module for Repast*

Recent research, both empirical and model-based, into subsistence strategies of Ancestral Pueblo peoples in southwestern Colorado from AD 600 – 1300 indicate that turkey was increasingly important through time as a protein source. In an effort to understand the dynamics of raising turkey, this research examines its costs and payoffs, including caloric input/output and protein payoffs, and how these might change as domestication intensifies. This module will be integrated into the agent-based model of the Village Ecodynamics Project, which couples human households to their environments in southwestern Colorado and is currently under expansion to include portions of the northern Rio Grande.

**Bocquet-Appel, Jean Pierre [156]** see *D Alpoim Guedes, Jade*

**Boehm, Andrew (Southern Methodist University)**

[29] *Identification of Faunal Remains Using Geometric Morphometrics on Bone Histology*  
Geometric morphometric techniques have demonstrated that inter-species differentiation is possible by analysis of true size and shape at the macroscopic scale. However, identification of animal bones from archaeological sites is nearly impossible when specimens are highly fragmented by multiple destructive taphonomic processes. In these situations, researchers can turn to microscopic methods of species identification, via bone histology. This study quantifies the microscopic bone tissue morphology using geometric morphometric techniques in order to 1) test the reliability of inter-species identification and 2) examine the ability of histological tissue analyses to be used in sex determination of species.

[85] see *Willis, Lauren M.*; [190] see *Meltzer, David J.*

**Boileau, Marie-Claude (Fitch Laboratory, BSA)**

[110] *Integrating macro-feature analysis to ceramic petrography for the identification of technological traditions*

Integrating ceramic petrography to the study of macro-features linked to specific techniques of fashioning and finishing allows for the identification of technological traditions as well as providing information about socio-economic contexts of production and circulation. As an example of this integrated approach, I will discuss the outcome of recent technological studies of Early Bronze Age pottery from Syria that revealed the presence of a variety of production systems where people consumed essentially specialist-produced pots, manufactured locally or imported from neighboring regions. This diversity reflects specific needs and the associated technological skills necessary to produce these functionally distinct vessels.

**Bollwerk, Elizabeth (University of Virginia)**

[9] *Placing People with Pipes: An Archaeological Study of Pipe Variation in the Middle Atlantic AD 1000 to 1700.*

Archaeologists investigating Late Woodland sites in the Middle Atlantic region have principally identified cultural groups and boundaries predicated on attributes of diagnostic ceramics, such as the presence or absence of types of temper, vessel form, and surface treatments. Native tobacco smoking pipes, as another class of material culture that exhibits similar regional variation of stylistic attributes, provide an opportunity to further explore cultural territories, boundaries and boundary permeability. Spatial analysis of intra and inter-site variation, based on the analysis of over 1000 pipes and pipe fragments curated in museum collections throughout the region provide

new insights into cultural changes, boundaries, and interactions in the Late Woodland Middle Atlantic region.

[59] *Discussant*

**Bond-Freeman, Tara**

[48] *The Late Preclassic Period at Ek Balam, Yucatan: A View from Fill Deposits*

In the Maya region, artifacts excavated from fill deposits in residential platforms are often regarded as disturbed and not useful for analysis, in other words what we might call "trash." Contrary to this assumption, an analysis of the ceramics from a site wide sample of excavations, primarily from residential platforms, has provided valuable information about the nature of the Late Preclassic "village" and the transition to the Early Classic Period at the site of Ek Balam. Based on a systematic analysis of these data, an initial settlement pattern is revealed for the site.

**Bonhage-Freund, Mary Theresa [90]** *see Branch-Raymer, Leslie*

**Bon-Harper, Sara (Monticello)**

[53] *Spatial Variation and Cultural Practice at Monticello's Site 8*

Spatial variation in artifact distributions on Monticello's Site 8 suggests that the inhabitants of one house engaged in different refuse disposal behaviors than did the residents of the other three known houses. Several analytical methods explore this plowed assemblage to understand artifact use and discard patterns, and the historical record is evoked to help explain the differences among household groups of enslaved field hands on this eighteenth-century plantation site in the Virginia piedmont.

**Boone, James (University of New Mexico) [44]** *Discussant*

**Borejsza, Aleksander (IIA UNAM), Emily McClung de Tapia (Instituto de Investigaciones Antropológicas, Universidad Nacional Autónoma de México), Isabel Rodríguez López, Lorenzo Vázquez Selem (Instituto de Geografía, Universidad Nacional Autónoma de México) and Sergey Sedov (Instituto de Geología, Universidad Nacional Autónoma de México)**

[20] *Changing Rural Landscapes At Santiago Tlalpan, Tlaxcala*

Recent fieldwork in the northern Block of Tlaxcala involved the recording of Holocene alluvial sequences along barrancas, collection of sherd scatters in tepetate badlands, and limited excavation of archaeological features in a large erosional pedestal. We documented dramatic changes in the local landscape, wrought by inputs of volcanic ash and agricultural activity. We have encountered only Late Formative and Middle through Late Postclassic artifacts, but charcoal-laden alluvial deposits point to continuing agricultural activity between these two occupations. A widespread colluvial cover containing Postclassic sherds may have been produced by intensive tillage before or the collapse of agricultural terraces after Conquest.

**Borejsza, Aleksander [20]** *see Lesure, Richard*

**Borgstede, Gregory**

[169] *Pecuniary History and Context of Archaeological Field Research in the Maya Highlands*

In his work in the Maya highlands, Robert Sharer developed complex and far-reaching conclusions based on meticulously collected and presented archaeological data, while recognizing that his interpretations were built on prior research and current academic and non-academic concerns and realities. In this vein, this paper examines the pecuniary history of archaeological field research from the 1940s to present in the Maya highlands. The data provide a quantifiable foundation for the analysis of historical funding trajectories, which is utilized to explore economic contextualization for its relevance to present and future field research, international relations, and the disciplinary future of Maya archaeology.

**Borojevic, Ksenija (Boston University)**

[67] *Plant Evidence from Caves in the Eastern Adriatic*

Plant macroremains were analyzed from Grapèeva cave on the island of Hvar in the Adriatic Sea and compared to the few available plant analyses from eastern Adriatic sites. This plant analysis provided an independent line of evidence for the use of Grapèeva as a ritual site during the Late Neolithic and for change in activities during the occupation of the cave. The comparison of plant assemblages from three caves demonstrated that plant analyses can reveal different functions among caves and contribute to differentiating utilitarian from ritual activities.

[67] *see Forenbafer, Staso*



**Bosquet, Dominique [130]** *see Golitko, Mark L.*

**Boston, Christine (U of Western Ontario) and Bernardo Arriaza (Instituto de Alta Investigacion, Centro de Investigaciones del Hombre en el Desierto y Departamento Antropologia, Universidad de Tarapaca, Arica, Chil)**

[130] *The Effects of Arsenic Exposure on Biological Growth in Pre-Hispanic Individuals from Northern Chile*

This poster discusses the effects of arsenic on the biological growth of pre-Hispanic individuals in northern Chile. This area is rich in arsenic, which is readily transmitted to humans. Arsenic exposure is associated with decreased biological growth, and it was hypothesized that arsenic caused decreased growth and was a catalyst for cultural practices of the region. Long bone measurements of 69 subadults were compared to Peruvian samples to test these hypotheses. The results of this analysis do not appear to support the hypotheses, but a range of contributing factors will also be discussed in explaining the results of this analysis.

**Boswell, Alicia (UCSD), Barker Farriss (University of North Carolina) and Brian Billman (University of North Carolina)**

[151] *The Chimu Frontier in the Moche Valley, Peru*

The Chimu Empire rose and controlled the North Coast of Peru during the Late Intermediate Period from AD 900 until their defeat by the Inca in 1470. Little is known about Chimu strategy along its border and relations with other culture groups in frontier contexts. Preliminary survey work conducted by the Moche Origins Project in 2006-2008 in the Upper Moche Valley suggests Chimu and Highland populations cohabited sites in strategic defensive locations and access points along the Chimu border. These sites may indicate potential Chimu strategy in borderland contexts and provide information regarding highland-coastal relationships.

**Boswell, Alicia [81]** *see Muñoz, Lizette A.*

**Boudreau, Monique [181]** *see Barbour, Warren T D*

**Boulanger, Matthew (University of Missouri Research Reactor) and Michael Glascock (University of Missouri)**

[168] *Salvage Archaeometry: Rescue, Preservation, and Dissemination of Geochemical Data* Archaeological provenance research has increased exponentially since nuclear reactors at Berkeley, Brookhaven, and Michigan established archaeometry laboratories in the 1960s. Yet, few first-generation laboratories exist today. Data from these labs represent substantial investments of resources and energy; however, these data are slowly being lost through laboratory closure and personnel retirement. We discuss efforts to salvage records from laboratories at Manchester and Berkeley to ensure availability to future researchers. We recommend current laboratories adopt protocols that ensure data are preserved in perpetuity. Data preservation is relevant to both current and future research, and to an historical understanding of our discipline.

**Boulanger, Matthew T [49]** *see Caffrey, Karen; [130]* *see Conlee, Christina A.*

**Bourlot, Tirso Javier [139]** *see Belardi, Juan Bautista*

**Bovy, Kristine (University of Rhode Island) and Kristy Golubiewski (University of Minnesota)**

[174] *Teaching Archaeological Method and Theory Using Interactive Web Technology*

Although archaeology is often best learned through hands-on experiences, creating such opportunities for interactive learning can be a challenge in large classes or when teaching collections are unavailable. Computer simulations are one way to solve this problem. However, creating interactive technology to meet the specific goals of a course is time consuming and requires technical expertise. We describe an ongoing project that was initially funded by the University of Rhode Island Student Technology Assistant Program. We designed interactive web activities related to course topics (e.g. typology, seriation, sampling), using actual data from the Poverty Point site in Louisiana (see <http://www.uri.edu/artsci/soc/bovy/>).

**Bowen, Gabe [130]** *see Cross, Sarah R.*

**Bowen, Joanne [53]** *see Clites, Elizabeth A.*

**Bowser, Brenda and Andrew Duff (Washington State University)**

[183] *Technological Style, Learning Traditions, and Ethnic Co-Residence: A Comparative Study of Corrugated Cooking Pots from Ethnoarchaeological and Archaeological Cases*

A common premise of archaeological pottery studies is that technological style is learned during early enculturation, likely to remain static throughout the lifetime of a potter, and maintained when potters migrate to new places, allowing archaeologists to reconstruct migrations and detect the formation of multi-ethnic settlements. We report ethnoarchaeological data from multi-ethnic villages in the Ecuadorian Amazon showing that adults re-learn pottery-making techniques, especially when they move to new communities, and we analyze technological attributes of corrugated pots to examine these historical trajectories. These data are then compared to an archaeological case of proposed multi-ethnic settlement in west-central New Mexico.

[183] *First Chair*

**Boyce, Joe [124]** *see Reinhardt, Eduard G*

**Boyd, Brian**

[141] *Animal/Inhuman*

The session organizer asks: "...why did some communities indulge in figurative imagery while others abstained from such images...?" My paper will focus on the contrast between the relative lack of figurative image making in the Epipalaeolithic Levant and the rich diversity of figurative image making in the subsequent Pre-Pottery Neolithic period. Current conventional understanding explains this contrast in terms of a socio-economic shift to animal domestication and agriculture. An alternative interpretation will place emphasis on changing human-animal relations within a radical ecology, drawing upon recent research in literary theory and philosophy.

**Boyd, Carolyn (SHUMLA) and Kim Cox (SHUMLA)**

[84] *Archaic Codices of the Lower Pecos*

The Lower Pecos River Region in southwest Texas and northern Mexico houses hundreds of rockshelters filled with elaborate pictographs dating to the Middle Archaic. These complex panels are pictorial narratives communicating mythological events. The White Shaman pictographic panel (41VV124) was previously interpreted by the author as a narrative detailing the hunt for sacred peyote. New findings demonstrate that not only does the panel communicate the prescription for that ritual hunt; it is a ritual reenactment of the first pilgrimage that led to the birth of gods, the establishment of the seasons, and the creation of the cosmos.

**Boyd, Charles (Radford University), Donna Boyd (Radford University), Douglas Drumheller (Greatest Generation MIA Recoveries), Jarrod Burks (Ohio Valley Archaeology, Inc.) and Rhett Herman (Radford University)**

[145] *Searching for the Goettge Patrol: Geophysical Remote Sensing and Archaeology on Guadalcanal*

Early in the Guadalcanal Campaign, a patrol of U. S. Marines under the command of Lt. Col. Frank Goettge was ambushed by Japanese troops. The remains of the dead have never been recovered. In July, 2008, an interdisciplinary team of archaeologists, historians, and physicists conducted a remote sensing survey and limited test excavations on Guadalcanal in an effort to locate the Goettge Patrol. Two major types of remote sensing were used, including ground penetrating radar and soil resistivity. Information gained helped to interpret the impact of natural and human forces on the site environment since World War II.

**Boyd, Donna [145]** *see Boyd, Charles C.*

**Boytner, Ran (UCLA)**

[162] *Mission: Field Programs As Windows To Archaeology*

In a 2006 *Archaeology Magazine* article, Brian Fagan suggested that as a discipline, we are failing to create the next generation of public support for archaeology. In response, the UCLA Field Programs was created in 2007, sending students to 13 field schools in 2008 alone. This paper will explore the rationales, history and goals of the UCLA Field Program and by extension, the possible impact of archaeology field programs across the board. It will then move to examine the unexpected benefits resulting from the program creation. Finally, it will examine the impact of the Paul Simon Federal Act on the future of field archaeology.

[105] *Discussant*

**Bracewell, Jennifer (PhD Candidate, McGill)**

[143] *The More Things Change... : Iron Age Re-Occupation of a Neolithic Landscape, a Case-Study*

This paper looks at the Iron Age occupation of the Ii paleo-estuary in Northern Ostrobothnia, Finland. Findings within the last ten years indicate an active utilization of this area, which was previously thought to have been abandoned during the pre-Roman Iron Age. This paper traces how a sedentary maritime hunter-gatherer way of life shaped the physical and cultural landscape of the later, more mobile Iron Age population. It also discusses how this re-use shapes the archaeological record, and how re-use can be recognized and considered in regional studies.

**Bradbury, Andrew [128]** see Carr, Philip J.

**Brady, Emmett (Kenyon College) and Edward Schortman (Kenyon College)**

[114] *The Politics of Forgetting at Terminal Classic Las Canoas, NW Honduras*

Recent excavations at the Late and Terminal Classic center of Las Canoas (AD 600-950) revealed several sizable platforms that were purposefully entombed largely intact. Unlike most cases of sequent construction, these late additions were not formally finished but were left as rounded mounds even as adjoining buildings remained in use. This paper considers the possibility that the buried structures were intentionally hidden from view as part of a realignment of political allegiances that took place within Las Canoas in the early 9th century. The implications of manipulating social memory for factional competition with Las Canoas are also considered.

**Brady, James (Cal State L.A.)**

[93] *A Preliminary Archaeological Assessment of Midnight Terror Cave, Belize*

During April and May 2008, a California State University, Los Angeles field project began a multi-year investigation of the recently discovered Midnight Terror Cave. During the month-long project almost half of the cave was surveyed and surface collected. The cave presents the most complex and thorough going system of cave modifications, in addition to large ceramic and osteological assemblages, that the author has seen in a quarter of a century of continuous field work. An overview of the project's work and a tentative interpretation of the results are presented here.

[93] see Cobb, Allan B.; [93] see Shaw, Leslie C.

**Brady, Kathleen (Hopewell Culture NHP) and Jennifer Pederson Weinberger (Hopewell Culture National Historical Park)**

[152] *Recent Investigations at Mound City Group, Ohio*

During the summers of 2007 and 2008 archaeological investigations were conducted at a little-known site just north of the Mound City Group earthworks. Site 33Ro338 was recorded as a Middle Woodland habitation site. Plans to reforest the area renewed interest in the site and led to a geophysical survey. Ground-truthing of anomalies yielded cultural features and artifacts, including bladelets. Subsequent excavations focused on two areas—a linear anomaly, and a circular anomaly within an alignment of five circular anomalies. Excavations found cultural features dating to the Middle Woodland and representing specialized activities associated with the use of the nearby earthworks.

**Bragdon, Kathleen (William and Mary)**

[116] *Kinship and Complexity: Ethnohistorical and Archaeological Evidence from Native Southern New England*

The earliest European observers of native communities in southern New England describe differing marriage and family types which, it has been suggested, may have been sub regional or tied to local economies. In contrast, this paper argues that these variable marriage and family types reflect a movement towards greater social and economic inequality in the century prior to the arrival of Europeans and discusses archaeological and ethnohistorical evidence in support.

**Braje, Todd (Humboldt State University), Jon Erlandson (University of Oregon) and Torben Rick (Smithsonian Institution)**

[165] *The Formation and Distribution of Large Shellmounds on California's Northern Channel Islands*

From San Francisco Bay to the Santa Barbara Channel, the California Coast is well known for its large shellmounds. We examine large middens of the Santa Barbara Coast and Northern Channel Islands, focusing on a several factors that contributed to the creation of very large accumulations of shell refuse at some sites. Population size, sedentism, and long occupation histories are key variables contributing to the formation of large shellmounds, but the long-term

productivity and resilience of intertidal habitats, the dietary importance of shellfish, the size of major shellfish food species, and other factors must also be considered.

**Braly, Bobby [142]** *see Sullivan, Lynne; [99]* *see Schroedl, Gerald F.; [99]* *see Ahlman, Todd*

**Branch-Raymer, Leslie (New South Associates), Leslie E. Branch-Raymer (New South Associates, Inc.) and Mary Theresa Bonhage-Freund (Alma College)**

[90] *It's all in the bones: Patterns of Faunal Exploitation from South Florida Black Dirt Midden Mounds*

New South Associates has evaluated numerous black dirt midden sites in South Florida under the auspices of the US Army Corps of Engineers. Well-preserved zooarchaeological assemblages often comprise the bulk of the archaeological remains from these sites. These assemblages suggest subsistence economies based primarily on the exploitation of local resources. Marine species, though comparatively rare, comprise the bulk of the bone and shell tools.

Zooarchaeological study offers the opportunity to examine patterns of faunal exploitation in south Florida. We synthesize these results and offer discussions of subsistence, resource exploitation, seasonality, temporal variation, and site patterning.

**Branch-Raymer, Leslie E. [80]** *see Windham, Jeannine; [90]* *see Branch-Raymer, Leslie*

**Brandt, Elizabeth (Arizona State University)**

[112] *Language, Personhood, and Place*

Drawing upon research in cognitive linguistics and Southwestern ethnography, the concepts of personhood, exchange between persons (gifting), and relationships between beings and humans in material exchanges are explored in a context of a cultural landscape where each exists. Placidity has been insufficiently explored. Aspects of bodies are mapped onto the landscape, and aspects of the landscape are mapped onto bodies in material objects, which are all mediated through language. Just as persons have life spans, so do both natural and constructed objects.

**Brandt, Steven (University of Florida) and Minassis Girma (Addis Ababa University, Ethiopia)**

[107] *Inventing History? Toward an Archaeology of the Great Oromo Migration of 16th and 17th Century Ethiopia*

Although Ethiopia has >80 ethnic groups, most published narratives of indigenous Ethiopian history draw almost exclusively upon the only two groups who have written histories, and who have dominated Ethiopian politics for centuries. Many of these publications ignore or dismiss as "inventions" the oral histories of other groups, effectively denying them their past and identity. Here we demonstrate how recent archaeological and ethnohistoric research in the Gilgil Gibe region of SW Ethiopia can help restore the history and identity of the Oromo and Yem people through a more accurate portrayal of the "Great Oromo Migration" of the 16th-17th Centuries.

**Brandt, Steven [3]** *see Hildebrand, Elisabeth*

**Branting, Scott (University of Chicago)**

[40] *Exploring Cultural Landscapes through Micro-Simulations of Ancient Traffic Patterns*

The use of GIS-T and agent-based simulations of ancient pedestrian movement, based on differing physiological models of groups of individuals and applied to networks of pathways on the scale of each person's step, offers a way to reconstruct movement through landscapes of the past. Understanding where movement took place can in turn reveal insights into how the cultural landscape was (re)created and used by all its various inhabitants. This paper will present an overview of the utilization of these simulations as well as the latest results of the ongoing validation and verification program at Kerkenes Dağ in Turkey.

**Braun, David [168]** *see Dillian, Carolyn*

**Bray, Tamara (Wayne State University)**

[131] *About Time: The Politics of "Culture Change" and the Promise of "Temporal Tolerance*

Time lies at the heart of archaeology and the way we understand time affects the way we do archaeology. As modern physics shows, time is embedded and dependent rather than separate and objective. This paper focuses on how re-thinking the concept of time opens up new possibilities for interpreting the past while simultaneously admitting the legitimacy of other (and others') temporalities. To illustrate, I consider the disparate trajectories of ceramic traditions from the coast and highlands of Ecuador vis the contextual & material nature of time, the dynamic

opposition between change & continuity, and the potential for enrichment of our interpretations and our appreciation of alterative temporalities.

[191] *Discussant*

**Bredthauer, Alison (University of Colorado)**

[18] *A Towering Enigma: A Discussion of Pueblo III Towers in southeastern Utah*

The function of towers, a common feature of Pueblo III period Ancestral Puebloan sites in the northern San Juan region, is the subject of much dispute. This poster describes towers around Comb Ridge in southeastern Utah and argues that towers served as markers of social boundaries for the Mesa Verdean culture group during the Pueblo III period. The poster will illustrate the diverse settings and architectural contexts of a sample of towers and examine patterns of tower architectural construction, spatial distribution and association with different site types and landscape attributes.

**Breen, Eleanor (University of Tennessee, Knoxville)**

[140] *Creolization: Modeling the Cultural Frontier*

Recent definitions of the colonial frontier have emphasized it less as a boundary between savagery and civilization, and more as a contested, unbounded zone of contact between two or more distinct groups. This paper explores one model proposed by anthropologists to interpret the product of this intercultural encounter, creolization, for free and enslaved communities living on Virginia plantations and then applies it to archaeological and documentary data. The challenge remains for archaeologists to decipher those patterns of material culture reflecting changes on cultural frontiers from those mirroring broader social and economic trajectories.

**Brewer-LaPorta, Margaret, Philip LaPorta (LaPorta Associates, L.L.C.) and Scott Minchak (LaPorta Associates, L.L.C.)**

[91] *Prehistoric Quarries in the Shadows of New York City*

Several types of prehistoric quarries exist in the New York metropolitan area. A plexus of quartz-vein quarries extends northward from New York City, along the eastern Hudson River. Lying north and west of the city are prehistoric chert quarries in Cambrian through Devonian carbonates. To the south and west are quarries developed in argillite, hornfels, tuff and basalt. Jasper occurrences are notable within the city limits. Lack of prehistoric quarry recognition by the archaeological community, in combination with ever increasing suburban development, presents a one-two punch in the demise of a resource representing the cradle of prehistoric economies.

**Bria, Rebecca (Vanderbilt University)**

[60] *Social Affiliations and Political Boundaries in the Norte Chico from the Middle Horizon to the Late Intermediate Period: Ceramic Evidence from the Pativilca Valley*

Across the central Andean coast, the shift from the Middle Horizon to the Late Intermediate Period is characterized by widespread political reorganization and the construction of new social affiliations. Among other correlates, these shifts are reflected in ceramic style, technological choice and regional distribution. This paper combines ceramic evidence from the Pativilca Valley with other available data from neighboring areas to discuss regional patterns and explore the evidence for political boundaries that existed in the Norte Chico between Chancay, Casma, and Chimú polities as well as the socio-cultural affiliations that may have cross-cut these boundaries.

**Briceno, Jesus [121] see Billman, Brian R.**

**Bridges, Elizabeth (University of Michigan)**

[82] *Before Chitradurga: The Development of Subordinate and Independent Nayaka Polities in Historic South Asia*

Nayaka relationships began as contracts between state rulers and regional leaders of historic South India. Over time these relationships produced subordinate regional states; eventually some of these developed into independent polities of varying size and power. These trends will be discussed generally and as they apply to the Keladi-Ikkeri Nayakas (1499-1763C.E), who ruled first under the Vijayanagara Empire and later as an economically influential state engaged in global trade. Results of recent archaeological survey at the sites of Keladi and Ikkeri will be presented and discussed, with special reference to the work of Dr. Barry Lewis on the Chitradurga Nayakas.

**Brighton, Stephen (University of Maryland)**

[135] *Finding Common Ground: Community, Collaboration, and Social Archaeology*

The aim of this paper is to redefine the term community and our role as archaeologists in finding

common ground with various publics. I discuss my collaboration with a transnational community; the Ballykilcline Society, a genealogical society scattered across the United States, Canada, Ireland, Scotland, and England. In the age of high speed internet, they represent a new sense of community formation in a broad spatial sense that creates a collective ideology of shared attachment to multiple places. This paper focuses on bringing together stakeholders and archaeologists to develop an integrative dialogue that speaks across spatial and social divides.

**Brite, Elizabeth, Alison V.G. Betts (University of Sydney) and Vadim N. Yagodin (Institute of History, Archaeology and Ethnography, Karakalpak Branch, Uzbek Academy of Sciences)**

[145] *Excavations at the Kara-tepe site, Khorezm, Uzbekistan*

The poster presents the findings of the first season of excavation at the Late Kushan-Early Medieval site of Kara-tepe. In collaboration with the University of Sydney and the Institute of History, Archaeology and Ethnography, Karakalpak Branch of the Uzbek Academy of Sciences, Kara-tepe is one of several sites currently being investigated in the Tash-k'irman oasis of northwestern Uzbekistan to explore the history and archaeology of this region. The Kara-tepe research program examines processes of cultural change during the decline of the ancient Chorasmanian polity in this important oasis.

**Brock, Daniel (University of Tennessee)**

[140] *A Multidisciplinary Approach to Understanding the Historic Landscape at Tipton-Haynes*

The Tipton-Haynes State Historic Site is a late eighteenth- through twentieth-century farmstead located in Johnson City, Tennessee. This site was home to two historically prominent Tennessee families and was the location of the "Battle of Franklin" leading to its preservation and acquisition by the state. Investigations have recently employed geophysical techniques, GIS, dendrochronology, archival research, and limited subsurface testing to interpret the historic landscape. This paper reviews the results of these multiple methods of investigation and relates them to the broader scope of diachronic change in the region and its implications for understanding historic farmsteads in the upland south.

[53] *see Yerka, Stephen J.*

**Brodbeck, Mark (HDR Engineering Inc)**

[180] *Exploring prehistoric land use at the Colorado River's "Big Bend", in the vicinity of Laughlin, Nevada and Bullhead City, Arizona*

The "Big Bend" of the Colorado River is a prominent landmark and natural crossing point near Laughlin, Nevada, and Bullhead City, Arizona. While the Arizona side, which includes the Big Bend Quarry Site, has been well documented, the Nevada side has received less attention archaeologically. Recent transportation-related surveys spanning the Arizona and Nevada sides of the "Big Bend" have documented a cross-section of prehistoric land use across the river valley. This paper will discuss the results of the surveys with emphases on human adaptation to the geomorphological landscape and placement within a regional settlement context.

[180] *First Chair*

**Broitman, Bernardo [85] see Flores-Fernandez, Carola F.**

**Bromley, Gordon [40] see Rademaker, Kurt M.**

**Bromley, Kent (University of Calgary) and Carrie L. Dennett (University of Calgary)**

[101] *Sitting Pretty: Jaguar Effigy Vessels and Questions of Cultural Connection in Pacific Nicaragua*

This poster will re-evaluate an often overlooked aspect of well-known Late Sapoa period (A.D. 1000-1250) Pataky polychrome jaguar effigy vessels from Pacific Nicaragua. Typically understood to be the jaguar's tail, we argue that the rear support may alternatively be interpreted as a chair, or seat, reminiscent of Taino duhos utilized by caciques in the performance of ritual ceremony in the Greater Antilles (post A.D. 1100). Here we explore the artistic representation of these "seats of power" and the potential viability of the duho analogy for inferring direct or indirect contact between Pacific Nicaragua and Pan-Caribbean cultures to the east.

**Brook, George (Geography-U. of Georgia), Holley Moyes (Wichita State University), Jaime Awe (Belize Institute of Archaeology) and James Webster (United States Environmental Protection Agency)**

[83] *Stalagmite Evidence from Belize Indicating Significant Droughts During the Classic Maya Era*  
A stalagmite from western Belize has provided a 3300-year record of climate change. UV-

stimulated luminescence with a temporal resolution of <5 years, shows that the most sustained period of drought from A.D. 700-1135 coincided with the collapse of the Classic Maya civilization and earlier droughts with Preclassic Abandonment and the Maya Hiatus. This work adds to the growing body of evidence for major droughts at the time of the Maya collapse and suggests that it was the long duration of the last drought, as much as its severity, that led to the final dénouement of the ruling elite.

**Brook, George [83]** *see Moyes, Holley*

**Brookes, Samuel (national forests in miss.) and melissa twaroski (usda forest service)**

[82] *early holocene climate change in the eastern united states: a view from mississippi*  
the hypsithermal climate event is frequently cited in the literature. this paper asks the question, is the hypsithermal visible in the archaeological record of mississippi? to answer this question, numerous artifact types are examined as well as quarrying behavior, exchange networks, the appearance of new artifact types and the appearance of mounds and mound groups during the period of 6000 - 3000 bc. All these factors are then considered and hypotheses are put forward to explain cultural events of this time.

**Brooks, James (SAR, Santa Fe) [1]** *Discussant*

**Brooks, Robert**

[82] *Analyzing Sacred Landscapes: A Comparison of the Arkansas River and Red River Caddoan Cultures*

Caddoan cultures occupied the western periphery of the Mississippian World and constructed a landscape of mound sites, centers, and residential locations. This build environment is part of a cultural system focused around religious practices. But, did these landscapes reflect common practices? The Arkansas River and Red River Caddoan cultures were comparatively analyzed using GIS and conventional data. Results of this study point to fundamental differences in the use of these cultural landscapes, especially on the part of the northern Arkansas River Caddoan groups.

**Brouwer, Marieka (Michigan State University)**

[18] *Regular Structures, Regular Tools? Lithic Standardization During the Pithouse-to-Pueblo Transition, New Mexico*

In the Salinas Valley of New Mexico, the Pithouse-to-Pueblo transition occurred around A.D. 700-1000 and was characterized by changes in ecological/economic practices, settlement patterns, and sociopolitical organization. Shifts also occurred in lithic procurement and production practices; however, the latter has not been thoroughly tested. This study will focus on complete tool assemblages from two sites in the Salinas Valley. Trends in lithic standardization across the transition will be explored statistically. In addition, this project will test whether shifts in mobility and economy are reflected materially in the lithic collections.

**Brown, David (UT Austin)**

[191] *The Jantsi Rumi Site: Small fortresses and Inka military strategies*

Inka fortresses in the northern highlands of Ecuador are variable in size, form and construction. Most reflect imperial security objectives but some of the smaller walled installations are difficult to evaluate in terms of logical military strategies. While many of these small sites may be observation posts, others could have ritual importance. In the Pambamarca complex of Inka forts north of Quito, the Jantsi Rumi site is one of several that may fall into this latter group. Like some of the larger, more complex forts, these small sites suggest that military and religious sectors were closely linked in Inka society.

**Brown, Gary (Aztec Ruins Natl Monument) and Paul F Reed (Center for Desert Archaeology)**

[144] *The Chacoan Period in the Middle San Juan Region: Aztec, Salmon, and their Neighbors*

Recent research in the Middle San Juan region has improved our perception of large Chacoan outliers such as Aztec and Salmon. Outside these spectacular Chacoan great houses, smaller residential and nonresidential sites contribute toward a comprehensive vision of ancient Puebloan society. Local great houses and other sites reveal similarities and differences with Chaco Canyon. We take a broad view of the Middle San Juan region during the Pueblo II-III transition in this paper. National Science Foundation-sponsored research and previous fieldwork, artifact, and archival studies help us create a regional model of Chacoan society to the north of Chaco Canyon.

**Brown, Gary [144]** *see Glowacki, Donna M.*

**Brown, James (Northwestern University) [42]** *Discussant*

**Brown, James [86]** *see Kelly, John E.*

**Brown, M. (The University of Texas At Arlington)**

[64] *Postclassic Veneration at the site of Xunantunich, Belize*

Recent investigations documented Postclassic veneration of a Preclassic pyramid in Xunantunich Group E. Str E-2 was initiated during the Middle Preclassic with two subsequent construction phases built in the Late Preclassic. Abandoned by the Terminal Preclassic, erosion then buried the pyramid's stairway in 1.5 meters of sediment. In the Postclassic, a small stone-lined altar was placed along the pyramid's central axis on this accumulation. It was associated with several dozen pointed chert implements, likely bloodletters. The placement of a Postclassic altar in front of the earliest documented pyramid at the site has implications for social memory of this sacred location and may reflect rituals related to ancestor veneration.

**Brown Vega, Margaret (Penn State University)**

[60] *Ritual Elaboration and Social and Political Reorganization of the Huaura Valley, A.D. 900-1400*

Mapping, excavations and analysis of surface materials from the Archaeological Complex of Acaray, Huaura Valley, provide evidence for the reorganization of smaller, diverse groups of people of the late Middle Horizon (ca. A.D. 900-1100) into a larger, politically unified community during the Late Intermediate Period (ca. A.D. 1100-1400). Ritual activities in the reconstructed fortress at Acaray solidified new group identities and enhanced security. Site characteristics, the nature of the activities that took place there, and regional data suggest Chancay people of the Huaura Valley were defending themselves and their autonomy against the expansionist Chimú Empire from the north coast.

**Brubaker, Robert (University of Arkansas)**

[136] *Putting up Barriers: Constructing Walls and Social Differences at Vijayanagara, South India*  
Varying in terms of form and probable function, masonry walls are a ubiquitous feature of the landscape of the precolonial South Indian imperial capital of Vijayanagara. In this paper I consider how variation in the form of Vijayanagara walls relates to likely processes of construction. Building upon the notion that the occupation one pursues is an important determinant of one's social persona, I suggest that Vijayanagara's walls (many of which were intended to demarcate social boundaries) both reflect (in their finished form) the contributions of, and helped (through their construction), to define the social personae of disparate laboring groups.

**Bruchac, Margaret (University of Connecticut)**

[173] *Lost and Found: Deconstructing Archaeological Constructions of Indigenous Funerary Objects*

Native American artifacts found in archaeological sites are typically identified as funerary objects only if they are known, by archaeologists, to resemble other objects found deposited in Native gravesites. Under current NAGPRA regulations, these objects are further identified as "associated" or "unassociated" based upon the degree to which they were discovered in close proximity with visible human remains. These categories are based and constructed upon non-indigenous accidents of excavation, habits of curation, fetishes, and research designs that do not necessarily reflect or respect the original indigenous intentions of deposition. More accurate models of excavation, identification, curation, and repatriation are needed.

**Brumfiel, Elizabeth (Northwestern University) [38]** *Discussant*

**Brunet, Julie (Université de Montréal)**

[53] *The Late Archaic in Eastern Québec: a view from the Témiscouata region*

The Témiscouata region is situated in the Lower Saint-Lawrence valley (Québec), at the heart of the Notre-Dame mountains and in proximity to the borders of New-Brunswick and Maine. The Témiscouata is also a natural circulation corridor linking the Saint-Lawrence valley and the Atlantic. Several archaeological sites are located in this region, which has been continuously occupied for the last 10 000 years. This poster presents the results of my Master's thesis research on the lithic assemblage of the CjEd-8 site, the only Late Archaic site in the Témiscouata region, as well as some cultural comparisons that can be made.



**Bruning, Susan (Southern Methodist University) [22] Discussant [159] Discussant**

**Bruno, Maria (Washington University in St. Louis) and Mabel Ramos Fernandez (Universidad Mayor de San Andres)**

[12] *Plant Remains from Residential and Mortuary Contexts at Mollo Kontu, Tiwanaku*  
In 2006, Proyecto Jach'a Marka began a program of flotation and paleoethnobotanical analysis in Tiwanaku, which included training of Bolivian university students and members of the Wankollo community. In this paper, we present preliminary data from the on-going analysis of macrobotanical remains from Mollo Kontu. We describe patterns of both wild and domesticated plants species and their potential uses in both residential and mortuary sectors of the site. Finally, we compare these patterns with those found at other Tiwanaku "barrios" by previous paleoethnobotanical researchers.

[12] *Second Chair* [12] *Third Organizer*

**Bruno, Maria C. [81] see Blom, Deborah E.**

**Bryant, Vaughn (Texas A & M University)**

[28] *Pollen: A valuable technique for forensic archaeology*

Pollen studies have played an important international role in high-profile forensic archaeology cases, but current applications have been limited. Recovered pollen from excavated WW II massacre sites have helped determine who committed those crimes; more recently, archaeological pollen evidence has played a key role in documenting ethnic genocide in Bosnia and has helped bring those perpetrators to justice. Because one cannot always determine in advance whether or not pollen evidence might help us understand the events associated with cases involving forensic archaeology, excavators should routinely collect samples that could be used for pollen analysis.

[145] *see Graf, Kelly E.*

**Buchanan, Briggs [44] see Hamilton, Marcus J; [179] see Collard, Mark**

**Buck, Paul (Desert Research Institute)**

[18] *Detecting Ancient Agricultural Fields in the Mt Trumbull, Arizona Region*

Archaeological survey of the Mt. Trumbull area of northwestern Arizona reveals a site density at least several times greater than previously known. In some areas, population density may be as high as that found in areas with perennial streams such as along the Virgin and Santa Clara Rivers in southwest Utah and Nevada. A recent NASA award is being used to investigate optimum prehistoric locations of ancient agricultural fields and develop a predictive model of where population aggregations might be expected. Soil and local climatic characteristics are also being investigated. Local high school students are conducting research as part of the project.

[174] *see Garfin, Timothy*

**Buell, David (University at Buffalo)**

[86] *Urbanism and the Knossian State: A View from Three Regions*

As the Knossian state expanded during the Neopalatial period, several previously established, yet small-scale, settlements such as Galatas, Zakros, Gournia and Agia Triada came to be remodelled by Knossos. As such, it must be considered that some Neopalatial centres were actively and intentionally created by Knossos in order to advance its own social objectives. This paper employs a regional approach using data from three surveys (Galatas, the Mesara and Gournia) with a view towards understanding how an abruptly constructed or reconstructed urban center affects the political, economic and ideological systems of the region in which it has been situated.

**Buikstra, Jane (Arizona State University), Katherine Miller (Arizona State University) and Lori Wright (Texas A & M)**

[169] *Robert Sharer and the Conjunctive Approach: A Bioarchaeological Perspective*

A hallmark of Robert Sharer's many significant contributions to archaeological research is his refinement and application of the conjunctive approach, culminating in the Early Copán Acropolis Project (with William Fash). By focusing explicitly upon the complex interrelationships between multiple lines of evidence, Sharer and co-workers have markedly advanced our knowledge of Maya political, economic, and social formations. This paper will explore the role that bioarchaeology has played in conjunctive approaches to Maya archaeology. We first consider bioarchaeological perspectives on the Maya "collapse" and then address the issue of dynasty and residence patterning.

**Buikstra, Jane [130]** *see Prevedorou, Eleni Anna*

**Bulcão, Suzana [139]** *see Mandarino, Marcelle Costa*

**Buonasera, Tammy (University of Arizona)**

[30] *Pass the Piagi Please: Organic Residue Evidence for Cooking Pandora Moth Larvae (Coloradia Pandora lindseyi) in an Early Ceramic Vessel from Owens Valley, California*  
Organic extracts of four pottery sherds from Owens Valley, California with early dates (ca. 700 B.P.) and macroscopically visible residues were analyzed using gas chromatography-mass spectrometry (GC-MS). The unique fatty acid profile of one sherd may indicate the earliest known preparation and consumption of piagi (Pandora moth larvae). Ethnographic accounts reveal that piagi was a storable resource for the Owens Valley Paiute, notable for its relatively high fat and protein content. Although difficult to detect with standard archaeological techniques, organic residue analysis may provide an alternative way to inform us about the use of this ephemeral resource in prehistory.

**Burdette, Kevin [125]** *see Rink, W. Jack*

**Burghardt, Lucy (Ripon College), Emily Stovel (Ripon College), Jonathan Palacek (Ripon College) and William T. Whitehead (Ripon College)**

[130] *A Database of South American Ceramics: Phase 2*

This poster will present the Phase II of a multiphase database development and research project aimed at creating a multi-national, lingual, and discipline information source covering the broad topic of ceramics in South American archaeology. The database is being redeployed in an open-source sql database platform, utilizing free and easily incorporated technologies such as google maps and google earth. Researchers and interested parties will be invited to participate in this initiative during our Phase III deployment in 2009.

**Burgess, Laurie (Smithsonian Institution), Douglas Owsley (Smithsonian Institution) and John Imlay (Smithsonian Institution)**

[174] *Death, Dogs and Monuments: Excavations at Congressional Cemetery, Washington, D.C.*  
Founded in 1807, Congressional Cemetery lies one mile east of the U.S. Capitol and holds the resting places of some of the city's most notable residents. Smithsonian excavations of three very different burial vaults have provided a look at the elite mortuary practices of nineteenth-century Washington, D.C. The vaults have helped shape the cultural landscape of the cemetery, which is still being transformed today by ongoing interments and daily involvement from the local community.

**Burke, Adrian [91]** *see Kolhatkar, Manek*; [88] *see Leclerc, Mathieu*

**Burks, Jarrod (Ohio Valley Archaeology, Inc.)**

[82] *Rediscovering Ohio's Ancient Earthen Monuments Using Geophysics*

Ohio is home to hundreds of ancient earthwork sites, many of which have never been examined in recent times—the locations of some have been lost. In this paper I present the results of recent geophysical surveys at the Steel Group site, an obscure cluster of earthworks in Ross County, Ohio. The 2007-2008 magnetometer surveys located many new enclosures, making Steel Group Ohio's newest ancient earthwork complex. These results highlight the need to conduct geophysical surveys at all earthworks sites—only then will we come to appreciate what was missed by the old compass-and-chain surveys from the 1800s.

[145] *see Boyd, Charles C.*

**Burnett, Paul (SWCA Environmental Consultants) and Erik Otárola-Castillo (Iowa State University)**

[88] *Building and Testing Predictive Models of Archaeological Site Types in Central Wyoming*  
Archaeological predictive models were constructed for various site types in central Wyoming using GIS and stepwise logistic regressions. These models are tested using set-aside data samples and ground truthing surveys. This poster presents the methods and model outputs, which include several maps that forecast the locations of various site types, ranging from historic debris scatters to prehistoric rock alignments. The models show the varied distribution of site types in the region and will be used by land managers and developers to make more informed decisions regarding the locations of forthcoming natural gas infrastructure.

**Burnett, Paul [34]** *see Phillips, Scott C.*

**Burnett, Richard [100]** *see Balzotti, Chris*

**Burnham, Laura (University of New Mexico) and Caitlin Smith (UNC-Chapel Hill)**

[121] *Reconstructing an Intermediate Household at Cerro Leon on the North Coast of Peru*  
This poster explores room function in Compound 3 at Cerro Leon. The compound, which was completely excavated, is one of a small number of medium-sized residential compounds located adjacent to the largest residence at the site, Compound 1. Although much smaller than Compound 1, these compounds are several times larger than most residences at Cerro Leon. Based on the spatial organization, architecture, interior features, and artifacts, specific domestic activities conducted in rooms and patios were identified. Compound 3 provides an important example of an intermediate noble residence of immigrant highlanders in the middle Moche Valley during the Early Intermediate Period.

**Burrell, Brittany [192]** *see Hansen, Gregory J.*

**Burton, Margie [110]** *see Quinn, Patrick S*

**Busby, Virginia (Army Environmental Command)**

[160] *AIMS: The Army Innovative Mitigation Strategy for NHPA Compliance*  
Based on the recognition of the need for improving CRM's approach to archaeological resource management and mitigation options, the Army Environmental Command has devised AIMS: The Army Innovative Mitigation Strategy as a tool which seeks to truly serve the public interest and to further of archaeological knowledge while supporting the Army mission through the consideration of a broad range of options including off-installation site preservation undertaken in concert with substantial consultation.

[160] *Second Chair*

**Bush, Jessica [88]** *see O'Boyle, Robert C.*

**Bush, Leslie (Macrobotanical Analysis)**

[17] *The Development of Plant Cultivation in Northeast Texas*  
Recent analysis of macrofloral assemblages and pollen cores from northeast Texas have yielded information about the emergence of plant cultivation there. Starchy and oily seeds cultivated elsewhere in the Eastern Woodlands appear only minimally in Woodland (Fourche Maline) contexts in northeast Texas, but they increase over time. Pollen profiles indicate a xeric climactic episode prior to the Caddo period. Wood charcoal at the Gene and Ruth Ann Stallings Site (41LR297) indicates decreased use of floodplain genera for fuel between Woodland and Early Caddo times, suggesting clearance of those areas for plant cultivation. Nutshell:wood ratios indicate decreasing use of nut mast.

**Buskey, Scott [67]** *see Williams, Joel C.*

**Buxeda i Garrigós, Jaume [49]** *see Iñáñez, Javier G.*

**Byerly, Ryan (SMU / SWCA) and Noreen Tuross (Harvard University)**

[29] *Intra-Tooth Isotopic Analysis and Hypoplasia Aetiology: Implications for Late Holocene Bison Health and Human Subsistence on the Northwestern Great Plains*  
Among Late Pleistocene-Late Holocene Northwestern and Central Great Plains bison, dental enamel hypoplasia (DEH), a well-recognized environmental and metabolic stress response, is morphologically and seasonally consistent. Deviations are rare and imply regular, localized physiological strain. However, one specimen from the Late Holocene Big Goose Creek site (Wyoming) displays a comparatively abnormal occurrence that perhaps suggests a more systemic trauma. Here, stable carbon and oxygen intra-tooth isotopic analysis is employed to: (1) evaluate DEH aetiology and, (2) elucidate the effects of potentially aberrant environmental conditions on bison health and human bison-based subsistence.

**Byrne, Sam [130]** *see Arriaza, Bernardo T.*

**Cable, Charlotte (Michigan State University) and Christopher P. Thornton (University of Pennsylvania)**

[39] *"Monumentality" and the Third Millennium 'Towers' of the Omani Peninsula*  
"Monumentality" and the social meaning of monuments has long been an important part of archaeological research into the prehistory of complex societies. Over the past century,

archaeological perspectives on ancient monuments and their economic, political, and cultural importance to prehistoric societies have ranged from form to function to phenomenon, and have prompted the confrontation of wide-ranging methodological and interpretive challenges. This paper explores these methodological and theoretical issues vis-à-vis on-going research into 3rd millennium BC “towers” on the Omani Peninsula – work being carried out under the auspices of Dr. Gregory L. Possehl, Director of the Bat Archaeological Project.

[59] *Discussant*

**Cable, Charlotte [43]** *see Sewell, Kristin J.*

**Cadena, Guadalupe (University of Texas at San Antonio)**

[29] *Obsidian Tools and Mobility Patterns in a region between the Great Basin and Columbia Plateau*

Shifts in hunter-gatherer mobility strategies will be examined in a Great Basin Columbia Plateau transitional zone in the Malheur National Forest, Oregon. X-ray fluorescence spectrometry (XRF) of obsidian projectile points identifies source locations and is used as a measure of hunter-gatherer mobility. It is expected that distance to obsidian sources will decline as mobility becomes increasingly constrained through time.

**Caffrey, Karen (UNC Chapel Hill), Matthew T. Boulanger (University of Missouri, Columbia), Michael D. Glascock (University of Missouri, Columbia) and Michael R. Bever (University of Nevada, Reno)**

[49] *Chemical Variation in Edwards Chert from the Callahan Divide, Texas*

Edwards chert, outcropping over much of the Central Texas Edwards Plateau, was utilized and traded extensively throughout prehistory. Chemical variation within the Edwards group is poorly known, in part due to its expansive outcrop area. Geological and archaeological samples of Edwards chert from the Callahan Divide, Texas, a geographically isolated outlier of the Edwards Plateau, are examined using Neutron Activation Analysis and Ultraviolet Fluorescence in an attempt to identify and map chemical variation over the Callahan Divide, address the utility of macroscopic identification of Edwards cherts, and examine the possible relationship between chemical composition and color.

**Calderari, Milena [139]** *see Kligmann, Debora M.*

**Caljean, Katie (Vanderbilt University)**

[191] *Identifying Local Indigenous Agency through the Material Manifestations of Resistance in Northern Ecuador*

According to Spanish chroniclers, Inka rulers during the early part of the sixteenth century were captivated by the expanse of the Empire's northern frontier. Ambitious attempts were made to conquer these verdant lands – only to be met by waves of indigenous resistance. The chronicles reveal detailed accounts of the colonial encounters that occurred between the Inka and local indigenous peoples of northern Ecuador, however, discrepancies between written documents and material evidence often result in the contestation of the narratives of history. The aim of this paper is to mediate these various lines of evidence and to demonstrate the ways in which the documented narratives of local agency and resistance can be identified through the material remains present at various sites along the Pambamarca complex.

**Callaghan, Michael (Vanderbilt University) and Brigitte Kovacevich (University of Virginia)**

[48] *Trash or Treasure: Jade Production Refuse in Classic Maya Residential Middens*

This paper will discuss refuse related to jade production in Classic Maya domestic middens and whether that refuse was truly “garbage” as we know it. While garbage contexts are often associated with household refuse – faunal remains, broken pottery, obsidian and chert debitage, and groundstone fragments – they are also a place for ritual caching related to craft production, potential termination rituals, and even occasional interment of human remains. These findings have compelled us to begin refining our ideas of what constitutes “garbage” in the archaeological record as well as how the Maya may have perceived, created, and utilized these deposits.

**Calleja, Janis (Brigham Young University)**

[179] *Lithic Analysis of Aspen Shelter, Central Utah*

Aspen Shelter is located on the Old Woman Plateau in central Utah yielding radiocarbon dates from cultural layers from approximately 4000 B.P. and spanning through approximately 1000 B.P. The two basin-shaped house floors uncovered at Aspen Shelter are the earliest in Utah to date. Ongoing research explores and compares the technological and spatial characteristics of tool

stone reduction at Aspen Shelter to late Archaic house floors and Fremont period pithouses from regional sites, primarily that of sites in the Clear Creek Canyon area of central Utah. The utility, implications, and results of task-oriented spatial analyses within lithic studies are discussed.

**Camaros, Edgard [85]** *see Colonese, André Carlo*

**Cameron, Catherine (University of Colorado)**

[61] *Migration and Cultural Transmission: Exploring the Role of the Captive*

This paper argues that archaeologists should widen the focus of their models of cultural transmission to recognize the contributions of captives to culture change. Captives, especially captive women, were a common social role in many prehistoric societies, especially those involved in frequent or endemic warfare, a situation that characterizes both the American Southwest after A.D. 1150 and post-Roman Europe. Captives brought with them a repertoire of technological skills, symbol systems, religious practices, social customs, and languages that were available for adoption by their captors. In spite of low social standing, captives could be potent vectors of culture change.

**Cameron, Grace and Scott Van Keuren (University of Vermont)**

[18] *The Vision of Fourteenth-Century Potters in East-Central Arizona*

The transition from geometric- to iconographic-style painted designs on polychrome bowls was a significant event in east-central Arizona. These Fourmile style vessels raise two important questions: what concepts did the painted bowls convey and how were they meant to be viewed within Ancestral Pueblo communities? The study surveys major museum whole vessel collections, including a newly curated assemblage at Brigham Young University, recovered from Fourmile Ruin, Arizona. The analysis combines use wear and design structure data to infer the original context of presentation and the possible ideological correlates of bowl interior motifs.

**Campbell, J. Michael [53]** *see Pedler, David*

**Campbell, Jennifer (University of Toronto)**

[136] *Politics, Economy, and Architecture: The Negotiation of Identity and Social Control along the Grand Trunk Road in Mughal South Asia*

This paper looks at how the imperial politics and trade economy of Mughal South Asia is directly reflected in architectural forms constructed along the Grand Trunk Road. Architecture sets the stage for political and economic activities and is contingent in social identity formation and maintenance. Looking specifically at imperial constructions of Mosques, Temples, Kos Minars, and Caravanserais I explore the uses of these structures and the information they contain regarding the religion, economy, and politics of the Mughal period. Architectural spaces when charged with social meaning structure the activities of travelers, traders and locals creating social meaning and identity.

**Campbell, Roderick (Joukowsky Institute)**

[15] *"The Great Affairs of the State": War and Sacrifice in Early China*

The Eastern Zhou text Zuo Zhuan is famously quoted as saying that "the great affairs of the state are war and sacrifice". In fact, sacrificial ritual, carefully negotiating positioning in the world, framed both war and peace. Sacrifice and war as violent ritual and ritualized violence were integral patterning practices in the creation of civilization. My paper will explore the civilizing processes of violence - no less than the story of "civilization" in ancient China - through changing political forms, ordering rituals and transformations of violence as reflected in inscriptions, burials and sacrificial remains from the Late Shang through the Western Zhou.

**Campbell, Sarah (Western Washington University)**

[165] *Interpreting Shell Midden Size on the Northwest Coast of North America*

Marine invertebrate exploitation on the Northwest Coast of North America began over 9,000 years ago, but large shell middens generally date after 4,000 years ago. Inferences about population size or intensification of hunter gatherer economies cannot be made on this basis without controlling for several factors. Variation in temporal distribution and duration of middens at the regional scale is argued to be strongly influenced by stability of sea level and shoreline landforms. More study of accumulation rates and the structure of activity areas within sites is needed to support intersite comparisons and inferences about changing settlement patterns and social organization.

**Cannariato, Kevin [83]** *see Kennett, Douglas J.*

**Cannarozzi, Nicole (University of Florida)**

[46] *A Zooarchaeological Analysis of Shellfish from The St. Catherines Island Shell Ring*  
 Invertebrate remains from the St. Catherines Island Shell Ring were identified using traditional zooarchaeological methods to determine the contribution of shellfish to the diet during the Late Archaic Period. As a complement to vertebrate analysis, identification of invertebrate fauna helps to understand the various roles that shellfish may have played in pre-Columbian economies. The addition of these data to existing studies contributes to our knowledge of food procurement strategies, season of collection, site seasonality, site formation processes, and site function on St. Catherines. These data provide an opportunity to reconstruct the use and occupation history of the ring site.

**Cantor, Miriam (Miriam Cantor Yale)**

[110] *Petrographic and Microprobe Analysis of Plain Ware from Chogha Sefid to Determine Cultural Origin*

This research is a petrographic and microprobe comparison of choices made by potters in the "chaîne opératoire" of plain red ware excavated at the site of Chogha Sefid, Iran in an effort to determine whether an intrusive population caused substantial, but not conclusive artifactual changes noted in the Chogha Mami Transitional Phase (CMT)(5400-5100 B.C.)and to determine whether an intrusive population blended with the indigenous cultural group. Ware excavated just prior to and after the CMT intrusion is typologically identical, necessitating analysis of the pottery technology to provide insight as to whether the two populations separated or merged.

**Canuto, Marcello (Yale University)**

[169] *The Sun Also Rises in the Southeast: Late Preclassic Developments in the Maya Periphery*  
 Bob Sharer's research at Chalchuapa, Quirigua, and finally at Copan have proved seminal to the development of a robust archaeology of the southeastern Maya region. Perhaps an overlooked aspect of his research in this area has been his interest in the tricky questions involving the region's ethnic diversity and political development during the Preclassic period. Nevertheless, Bob's foundational research on these topics has been a guide to my own research into the Preclassic of the Copan region. New data from the Copan region are presented to discuss the nature and transformation of the southeastern Maya region during the Late Preclassic.

[169] *First Chair*

**Cappellini, Enrico [118]** *see Solazzo, Caroline*

**Capriles, Jose (Washington University), Claudia Rivera Casanovas (Universidad Mayor de San Andres) and Timothy McAndrews (University of Wisconsin - La Crosse)**

[45] *Faunal resources use and exchange during the Late Formative and Tiwanaku periods in the Cochabamba Lower Valley, Bolivia*

In this paper we present results of the taxonomic identification and bone modification analysis of archaeofaunal remains recovered from the site of Pirque Alto located in the Cochabamba Lower Valley. The faunal assemblage includes a preponderance of domesticated camelids followed by a range of microfauna. Camelids were not part of the local fauna and had to be transported to the site. In addition, specimens of exotic taxa from the tropical lowlands were identified. The analyzed faunal assemblage suggests Pirque Alto was engaged in multiple exchange complimentary circuits between different ecoregions originated during the Formative Period and reinforced during Tiwanaku times.

**Carballo, David (Penn State)**

[161] *Evolutionary Dynamics of Cooperation: An Introduction and Application to Central Mexico.*  
 Large-scale cooperation can be established and maintained through integrative ritual and social norms promoting individual and collective labor duties. I explore variability in practices along the spectrum of political strategy within complex polities—focusing on central Mexico, but drawing on comparisons with other regions of Mesoamerica and the world. I evaluate methodologies for applying evolutionary cooperation models to archaeological cases and emphasize the importance of refining and expanding these models based on the diachronic breadth of the archaeological record. Insights drawn from political-economic, practice, and game theories can be reconciled in modeling the social dynamics of past cooperative enterprises.

[161] *First Chair; [20] see Lesure, Richard*

**Carballo, Jennifer [20]** *see Lesure, Richard*

**Card, Jeb (SIU Carbondale) and Laura Matthew (Marquette University)**

[2] *Indigenous Mesoamerican Conquerors in Central America*

The sixteenth-century conquest of Mesoamerica is often called the "Spanish Conquest." Yet much of the fighting, dying, and colonizing on the "Spanish" side was done by Mesoamericans. Thousands of men joined the Spanish-led expeditions into Central America and beyond, followed soon in some cases by their relatives and compatriots. Using archaeological and documentary evidence from two Ciudad Vieja towns (Almolonga in Guatemala and San Salvador in El Salvador) we examine the importance of this generation of indigenous conquerors, their impact in the new colonies, and the larger forces that merged them with the people they had once conquered.

**Caretta, Nicolas (UASLP), Achim Lelgemann (CCSyH-UASLP) and Armando Nicolau (INAH-Zacatecas)**

[132] *Una larga historia: 1500 años de ocupación prehispánica en el Cañón de Juchipila, Zacatecas*

Investigaciones arqueológicas recientes en el Cañón de Juchipila, Zacatecas, en el noroccidente de México, en particular dos de sus sitios de filiación caxcán, han permitido elaborar una secuencia cronológica que abarca desde el Formativo terminal hasta el momento de la Conquista española (A.D. 1 ~ 1540 A.D.). A través de los datos recuperados también ha sido posible delinear la dinámica cultural de las poblaciones que se asentaron en esta zona, así como sus relaciones sociales con otros grupos de la Mesoamérica Mayor.

**Carlock, Bradley [143]** see *Parkinson, William A*

**Carlson, Risa (University of Cambridge), James Baichtal (US Forest Service - Tongass National Forest) and Risa Carlson (University of Cambridge / USFS Tongass National Forest)**

[175] *Paleogeography of the Late Pleistocene and Quaternary Coastlines of Southeast Alaska and their potential Archaeological Significance*

Literature search/field reconnaissance produced a dataset of 327 shell-bearing raised-marine deposits throughout Southeast Alaska, including site location, elevation, description, and 180 radiocarbon dates beginning at 14,380 BP. Interpretation of this data gives insight in the timing and complexity of isostatic crustal adjustments from glaciation/deglaciation, eustatic sealevel change, subsequent tectonic uplift, and the ability to plot sealevel through time and space. The data suggests ice loading during the LGM resulted in a forebulge west of the ice front. Forebulge collapse after deglaciation and rising sea levels provide one explanation for the absence today of coastal archaeological sites prior to 10,300 B.P.

**Carlson, Risa [175]** see *Carlson, Risa J.*

**Carmen, McCormick [83]** see *Dunning, Nicholas P.*

**Carpenter, Lacey (Northwestern University), Lacy Carpenter (Northwestern University) and William Whitehead (Ripon College and UWC-Fond du Lac)**

[99] *Paleoethnobotany of the Site of El Palmillo, Oaxaca, Mexico*

Results of a palaeoethnobotanical study will be presented, focusing on the identification of macrobotanical remains. Plant use and environmental impact will be discussed, especially the role of pulque production. Wood identification and local forest composition data will also be presented.

**Carpenter, Lacy [99]** see *Carpenter, Lacey B*

**Carper, Raven [91]** see *Perez Winter, Cecilia*

**Carr, Christopher and Anna Novotny (Arizona State University)**

[112] *The Complexity of Relational Personhood Expressed in Ritual Dramas of Ohio Hopewell Peoples*

Ohio Hopewell peoples arranged skeletons, cremations, and artifacts within burials into the forms of bird-human composites, birds, human faces, and geometric depictions of headdresses and cosmological themes. These arrangements likely indicate the performance of ritual dramas that featured mythological characters or other personages, and suggest the status of the compositions as persons. Anthropologie du terrain and other bioarchaeological methods are used to distinguish between unintentional taphonomic processes and intentional placement. In turn, the

constituents used to form some compositions were also probably attributed personhood. This nesting of persons within persons suggests a complex, relational understanding of personhood by Hopewell peoples.

[112] *Third Organizer*

**Carr, Christopher [53]** *see Frashuer, Anya C.*

**Carr, Dillon [84]** *see Norder, John W.*

**Carr, Kurt (The State Museum of Pennsylvania), Frank Vento (Clarion University of Pennsylvania) and James Adovasio (Mercyhurst College)**

[190] *Paleoindian research in Pennsylvania: A Report on the 2008 Field Investigations at the Shoop Site*

The Shoop site was first reported by John Witthoft in 1952. Based on unprovenanced, surface collected artifacts several researches have revised Witthoft's conclusions. Consisting of approximately 4000 artifacts, with a high ratio of tools to debitage, the most common tool types are small endscrapers. Nearly all of the artifacts are made on Onondaga chert from 350 kilometers to the northwest. This presentation is the result of the first systematic excavation ever conducted at the site and will include the first comprehensive mapping, lithic sourcing analysis, the results of luminescence dating and a description of over 700 mapped artifacts recovered during 2008.

**Carr, Philip (University of South Alabama) and Andrew Bradbury (Cultural Resource Analysts Inc.)**

[128] *The Organization of Early Archaic Technology in the Southeast*

The Early Archaic in the Southeast is viewed as a period dominated by small, egalitarian bands, large territorial ranges, and a high degree of mobility. Territorial ranges became increasingly restricted over time due to population growth. Bands of related individuals periodically came together for social and ceremonial purposes, and information exchange. This traditional as presented in many general overviews is challenged here using an organization of technology approach and lithic data from a number of sites. While hampered due to the lack of comparative data, it is clear the Early Archaic is more varied and complex than traditionally inferred.

**Carr, Robert (AHC), Jeff B. Ransom (Office of Historic and Archaeological Resources), Michael P. Pateman (University of Cincinnati) and William C. Schaffer (University of Arkansas)**

[67] *Ritual Use of Caves in the Bahamas*

Recent archaeological and bioarchaeological studies have assessed the significance of Bahamian caves to Lucayan mortuary ritual. Caves are mythical entities and important within the indigenous cosmology of the Lucayans and peoples native to the West Indies. An overview of Bahamian burial caves and associated human remains, grave goods, and their chronology will be presented with an emphasis on ritual mortuary practices.

**Carrasco, Michael (Florida State University)**

[187] *Performativity and Presence in Maya Hieroglyphs*

The question of audience is a growing area of interest in epigraphy and kindred disciplines. Based on analogy with the ethnographic and historic records, recent scholarship suggests that much of the hieroglyphic corpus was read to an audience or served as a basis for other oral performance. While this is surely the case in some instances, this theory fails to account for inaccessible texts or those clearly not intended for a listening audience. What were these texts for? This paper explores how the presence of text was an important component of its agency and an inscribed object's meaning.

**Carriker, Emily (The University of North Florida)**

[32] *A Morphological Analysis of Gila Polychrome from Paquime*

Several scholars have noted the unusual distribution of Gila Polychrome at the site of Paquime (a.k.a. Casas Grandes). The analyses reported in this poster compare the morphological features (size and shape) of this enigmatic pottery style with those of more common types found at Paquime. In particular, I compare Gila Polychrome with Casas Grandes Palenware, Ramos Black, Madera Black-on-red, and Ramos and Escondida Polychromes. My goal is to explore the correlation (or lack thereof) between ceramic style and function and thus develop a better understanding of the function of these different styles in the prehistoric Casas Grandes culture.



**Carroll, Alex (Northern Michigan University)**

[109] *Place, Performance, and Cultural Identity: Ritual Pictographs of the Burnt Bluff Area of the Upper Peninsula, Michigan*

The Upper Peninsula of Michigan is perhaps remarkable in its sheer dearth of petroglyph and pictograph sites. One exception is Spider Cave, situated on the southern tip of the Garden Peninsula. This paper employs a theory of ritual praxis informed by Bourdieu's concept of habitus and behavioral archaeological tenants (sensu Schiffer 2002) to examine the construction of cultural identities rooted in emplaced rituals. Utilizing evidence of the dominant physiographic features of the landscape and behavioral performance characteristics recorded in pictographs, a large numbers of projectile points, and ethnohistoric records, prevalent site selection practices and epistemic frameworks are articulated.

**Carter, Tristan (McMaster University), Francois-Xavier Le Bourdonnec (CNRS/ Bordeaux 3), Gérard Poupeau (CNRS / Université Bordeaux 3) and Klaus Schmidt (Deutsches Archäologisches Institut, Istanbul)**

[95] *From PIXE to Pilgrimage? Obsidian Sourcing at the Neolithic Temple Complex of Göbekli Tepe (SE Anatolia)*

Located in SE Anatolia, the Pre-Pottery Neolithic site of Göbekli Tepe is interpreted as the world's oldest temple complex (10th millennium BC), its finds suggesting links with three cultural regions: Upper Mesopotamia, the Zagros and southern Levant. By sourcing the Göbekli Tepe obsidian we aimed to clarify the centre's supra-regional connections. The 100 artifacts characterized by PIXE embody three sources (Cappadocian and East Anatolian), whose origin, ratio and forms provide the type of hybrid data that one could have hypothesized with regard to the material correlates for a pilgrimage site, i.e. more variable than assemblages from nearby contemporary settlements.

**Carver, Charisse (Arizona State University)**

[96] *Gender in Early Medieval France: A Reevaluation*

Gender is thought to be a fundamental organizing force in human society. While conceptually understood to be distinct from biological sex, archaeologists of early medieval society often ignore it completely, uncritically correlate it with sex, or rely unquestioningly on historical documents. Indeed, gender is multifaceted, requiring a theoretically and methodologically nuanced approach. By incorporating various archaeological and bioarchaeological methods, I will show how gender in early medieval France (c. AD 500-700) can challenge our modern Western notions of gender during this time period.

**Case, D. Troy [53] see Schach, Emily A.****Casile, Claudette (Washington State University), John G. Jones (Washington State University) and Nicholas P. Dunning (University of Cincinnati)**

[99] *Human and Environmental Interactions Derived from a Palynological Investigation on Marie-Galante, French West Indies*

A 6.7 meter core was collected in the northern portion of the island of Marie-Galante, a department of Guadeloupe. The core displayed an impressive depositional sequence reflecting both environmental and cultural changes. This detailed analysis of fossil pollen and sediments, the first of its kind in this region, provides insights into patterns of prehistoric colonization, deforestation and historical activities. Variations in vegetation assemblages, reflected in the pollen recovered, place the cultural changes in an environmental context. A chronological framework for these human/environmental events has been established with a series of new radiocarbon dates from this core.

**Cassidy, Jim**

[49] *On the Enigmatic Stone-Tool Reamers from the Early Holocene Component at Eel Point, San Clemente Island, California*

A localized work area in the early Holocene component of the Eel Point site on San Clemente Island, California, has yielded a comprehensive wood working tool-kit. The composition of these tools is unlike any other stone-tool assemblage recovered from sites found along the Southern California coast or Channel Islands. However, the most abundant tool form recovered to date includes 12 whole and partial reamers. The abrasion on these reamers appears to result from harder substances, such as stone. An examination of the morphological and functional characteristics of the reamers will be presented, along with an exploration of possible use applications.

**Cassman, Vicki (University of Delaware Dept of Art Conservation), Bernardo Arriaza (Instituto de Alta Investigación, Universidad de Tarapacá, Arica, Chile), Nancy Odegaard (Arizona State Museum, University of Arizona) and Vivien Standen (Departamento de Antropología, Universidad de Tarapacá, Chile)**

[71] *Textile Analysis of Chinchorro Twined Shrouds (8000-2000 BC)*

The early Chinchorro hunter gatherers of what is now Northern Chile and Southern Peru made use of two media for their artistic expressions, their own bodies and large twined reeds mats. Analyses of fiber, dye and stylistic variation on a dozen of these first decorated textiles from the excavations at the Morro site in Arica, help build a complex picture of the Chinchorros daily lives. The twined reed mats by 6000 B.C. were embroidered with dyed camelid hair. The interdisciplinary textile study of perishable materials provides new insights into the lives of the first settlers in the Andean coast.

[71] *First Chair*

**Castellon, Ignacio [20] see Castellon Huerta, Blas R.**

**Castellon Huerta, Blas and Ignacio Castellon**

[20] *Los Teteles de Santo Nombre: un sitio formativo de la region sureste de Puebla*

El sitio de Los Teteles, se ubica en el ejido de Santo Nombre, Tlacotepec de Benito Juárez, Puebla. Se trata de un asentamiento grande que aparentemente tuvo su principal ocupación durante el Formativo tardío (400 a.C. – 200 d.C.). A partir de 2008 iniciamos los primeros trabajos arqueológicos para un estudio integral de este sitio que se compone de varios conjuntos de plazas y montículos en un área de 56 hectáreas, y un área habitacional aún indeterminada. En las observaciones preliminares, sabemos que este sitio pertenece a la misma época y tal vez a la misma tradición de los sitios Formativos del Valle de Tehuacán, especialmente el de Quachilco, previamente estudiado por MacNeish y Drennan, hace más de tres décadas. Sin embargo, Los Teteles es un asentamiento mucho más grande, que se encuentra dentro del área donde se entrelazan los estilos de la región centro de Oaxaca, la Mixteca, y el valle poblano-tlaxcalteca. Esta comunicación presenta los primeros avances de trabajo en este sitio y los problemas de investigación a futuro.

**Castillo, Rafael [58] see Kovacevich, Brigitte**

**Castillo, Victor (Universidad de San Carlos de Guatemala), Hector Neff (University of California, Long Beach), M. James Blackman (Smithsonian Institution) and Ronald Bishop (Smithsonian Institution)**

[58] *Mold made figurines from the South Coast of Guatemala: sources of raw material and proveniences*

Mold made figurines from the pacific coast of Guatemala have been forgotten in the study of South Coast archaeological artifacts for so long. Known as Tiquisate figurines, many of these figurines are now in public and private Guatemalan archaeological collections, and most of them were not recovered in systematic excavations, so archaeological record for them is missing. Nevertheless, a small group of figurines do have archaeological data, and this information is enormously significant to trace proveniences and contexts. Noteworthy, the ceramic's compositional analysis allows determining the sources of raw material.

**Castillo, Victor J. [115] see Alexandri, Serinah**

**Castillo Butters, Luis Jaime [15] see Rengifo, Carlos Enrique**

**Castillo-Butters, Luis (Pontificia Univ Catolica del Peru) and Julio Rucabado (PUCP)**

[15] *War and peace among the Mochicas from jequetepeque*

Even though war and conflict are evident in the development of the early Moche states from Jequetepeque, long periods of peace and stability must have been common. In this presentation we examine the multiple political strategies alternative to war and endemic conflict in the structuring of the opportunistic states that characterize this region. Social interactions (marriage and migration), inter polity relations, and ideological activities are analyzed in a regionally restricted scale to reveal the complexity of this society.

[45] *Discussant*

**Catlin, Brianne [110] see Ford, Anabel**

**Caulk, Grady (Corps of Engineers)**

[90] *Comprehensive Everglades Restoration Plan (CERP): Cultural Resources Mitigation Strategies*

A number of strategies have been developed to mitigate the potential impacts to cultural resources from the landscape level CERP projects. While each site is unique and potential impacts may be different there are a number of general mitigation strategies that can be applied. Project specific examples will be used to illustrate the strategies used for the CERP projects. These measures include; project modification to avoid and minimize effects, operational monitoring to insure that avoidance measures are effective, single site mitigation and site cluster mitigation. Some of these measures have been implemented others are still being developed.

[90] *First Chair*

**Caulk, Grady [90]** see *Caulk, Grady H.*

**Causey, Michael (University of Oxford)**

[107] *Moving from the Deterministic to the Ideological: GIS as a Post-Processual Tool for Understanding the Past in East Africa*

Although a powerful utility for spatial analysis and computer modeling, GIS is often criticized as a strictly processual tool for interpreting the past. Not only are ideological factors excluded in many archaeological applications of GIS, but also the voice and perspective of indigenous societies. Unilinear translations notwithstanding, the flexibility of GIS allows for the inclusion of plenary datasets garnered from interdisciplinary approaches, including those obtained from societies living in the present. Using Hodder's ideas concerning 'relational analogies', this paper explains how GIS can be used as a post-processual tool for interpreting precolonial pastoralist behavior on the Laikipia Plateau, Kenya.

**Cecil, Leslie (Stephen F. Austin State University)**

[99] *Lacustrine Snail Shells, Postclassic Maya, and Local Central Peten Trade*

Investigating local trade networks of the central Peten Postclassic Maya contributes to understanding the fusion-fission nature of various socio-political groups as they vied for territory and dealt with European expansion. Studying the area's most common pottery ware adds to this knowledge. INAA suggests that local trade patterns exist because of differences in the pottery's chemical composition. However, statistically-significant chemical compositional groups do not occur because of the high frequency of calcium. This poster demonstrates that with the addition of Thermal Ionization Mass Spectroscopy, archaeologists can use the shell inclusions from the Snail-Inclusion Paste ware pottery to better understand local trade.

**Cerezo-Roman, Jessica (University of Arizona)**

[10] *Fragmentation, transformation, and cremation rituals among the Hohokam of Southern Arizona*

Hohokam cremations often have low weights and explanations of this pattern have varied. An archaeological example of the division of an individual into at least two secondary cremations is documented. This finding is discussed within an approach that includes how fragmentation of the body during cremation could lead to a more complex network of social relationships. Also, transformation(s) of an individual identity can occur through the burning of the individual and post-cremation rituals. Among the methodological implications, the reevaluation of paleodemographic profiles in past cremation studies is necessary and an attempt at refitting between cremations is suggested.

[10] *First Chair*

**Cervantes, Gabriela (PUCP), Linda Perry (Smithsonian Institution) and Ursel Wagner (Munich Technical University)**

[170] *Variability and Significance of Miniature Vessels from Huaca Loro: A Multi-Disciplinary Examination*

Small, handmade, ceramic vessels traditionally called *crisoles* are often found in large numbers in prehispanic elite tombs on the north coast. These miniature vessels pale in artistic and technical qualities in comparison with associated metal and other types of grave goods and usually receive little attention. This paper presents results of systematic analysis of shape, paste and firing, as well as contents of the vessels, and organization and distribution of vessels within tombs. Together with variation in firing and paste, the diversity of food residues found suggests similarly diverse funerary participants.

**Cervantes, Gabriela [170]** see *Shimada, Izumi*

**César Souza e Silva, Cláudio [139]** *see Silva, Rosicler T.*

**Chamberlin, Matthew (James Madison University) and Alison Rautman (Michigan State University)**

[18] *Conflict and its Aftermath in the Salinas Pueblo Province*

Excavations undertaken at Frank's Ruin Pueblo, a thirteenth century village in the Salinas Pueblo Province of New Mexico, reveal a multi-stage architectural evolution from dispersed to aggregated settlement and strong evidence of catastrophic burning. We suggest that the Frank's Ruin village responded to population massing in the nearby Rio Abajo region with increased defensive posturing, were driven temporarily from their home, and returned to rebuild and create a new plaza-pueblo shortly before the final abandonment of the site.

**Chamblee, John (University of Georgia) and Mark Williams (University of Georgia)**

[157] *Almost There! CRM Data and Macroregional Analysis in Georgia*

Enterprise-scale relational databases are well established in Cultural Resource Management archaeology. As these technologies become more available and usable, opportunities for comparative research emerge. Analytical results will impact anthropological theory and CRM priorities. At the Georgia Archaeological Site File, we have new opportunities in our recently developed, statewide, digital, and searchable archive of CRM reports. Quantitative analysis of this archive reveals macroregional differences in prehistoric material culture recovery. We suggest these differences exist not because of varying site formation processes or CRM practices, but from prehistoric cultural variation. Now that we can demonstrate such variation, we must explore it.

**Chan, Rebecca (HUROP), Jennifer Beyer (University of Michigan), Kate Hammond and Rebecca Chan (University of Illinois, Urbana-Champaign)**

[31] *Educating Teachers and Creating Curriculum: Examples from the Homol'ovi Ruins State Park, Arizona*

The relationship between archaeology and K-12 education is potentially one of mutualism: the interdisciplinary and participatory nature of archaeology makes it an engaging teaching subject, while impressionable students are receptive to the themes of cultural appreciation, conservation and stewardship stressed by the discipline. Challenges to integrating the archaeology into local K-12 education include time constraints, state educational standards and the education of teachers. This poster describes the development of a site-based curriculum at the Homol'ovi Ruins State Park, which serves as an educational medium between the academic world of archaeology, a Native American community, and the public.

**Chan, Rebecca [31]** *see Chan, Rebecca C.*

**Chang, Claudia (Sweet Briar College)**

[16] *Agro-pastoralism as the Basis for Iron Age Social Complexity in Southeastern Kazakhstan*

The Iron Age of the Eurasian Steppe has been characterized as marking the beginnings of the social formation of pastoral nomadic confederacies that dominated the steppe through ranked clans and elite leadership. Over the past decade and a half our research on Iron Age settlements suggests that the crops such as millet, wheat, barley and rice contributed to semi-sedentary or sedentary systems of livestock husbandry. While elite leadership appeared to be based on military prowess and "nomadic traditions," community organization of the Talgar Iron Age settlements had its foundation in an agro-pastoral economy.

[63] *First Chair* [63] *Second Organizer*; [63] *see Tourtellotte, Perry A.*

**Chapa, Reymundo, Emily Sharp (Vanderbilt University) and Stefanie Bautista (Stanford University)**

[97] *The Proxemics of Public and Private Space at the Colonial Period Settlement of Malata, Peru*

This paper presents preliminary findings from excavations of three Colonial buildings at Malata. Structure 15 was an administrative structure; structure 26 was an elite residence; and structure 28 likely restricted access to a courtyard in front of the elite residence. Although artifacts alone can be used to confirm a building's function, a clearer picture develops when structures are evaluated against a settlement plan that is preconceived. At Malata, proximity to the Spanish plaza reinforced a strict social order, one that probably resonated with a spatial hierarchy between civic-ceremonial, public, and domestic spaces at the site during Inkaic times.

**Chapman, Richard (University of New Mexico)**

[171] *An Examination of Indigenous Settlement Dynamics in the Upper Middle Rio Grande Valley from Spanish Entrada Accounts*

Archeological evidence indicates that ancestral Pueblo Indian settlement of the Upper Middle Rio Grande Valley from the period AD 1300-1500 involved annual cycles of aggregation during winter at village centers, population dispersal across the landscape from spring through fall to engage in agriculture and other resource procurement activities, and frequent population relocation between villages in response to longer term climatic cycles affecting sub-regional resource productivity. Entrada chronicles are examined to evaluate whether this model of seasonal aggregation and dispersal, and longer term cycles of abandonment and relocation, was still operating in the 16th and early 17th centuries.

**Charles, Douglas (Wesleyan University)**

[152] *What Is This Thing Called Hopewell?*

Despite almost two centuries of research, little attention has actually been devoted to understanding the origins of Hopewell. "Hopewell" is a creation of modern archaeology, and an understanding of the origin of Hopewell lies in the recent past. Nevertheless, the temporally- and geographically-bounded series of events and processes archaeologists have amalgamated as Hopewell does bear investigation. It will be argued that the efflorescence of earthwork construction, mortuary ritual, and exchange of non-local materials identified as Hopewellian may be seen as manifestations of social and political activities (negotiations, contestations) in the unique conditions of a particular point in Eastern Woodland prehistory.

**Charlton, Thomas (University of Iowa) and María Eugenia Guevara Mendoza (Escuela Nacional de Conservación, Restauración y Museografía, INAH, México)**

[110] *Petrographic and INAA Studies of Teotihuacan Period Ceramics from Rural Sites*

Recent Instrumental Neutron Activation Analyses (INAA) and Petrographic Compositional Analyses of 102 sherds from four rural sites in the Teotihuacan Valley have provided information on the location and context of production and on the selection of tempers related to the forms and functions of the ceramic vessels.

**Charlton, Thomas H. [53]** see Reynolds, Cerisa R.; **[76]** see Otis Charlton, Cynthia L.; **[166]** see Fournier, Patricia

**Chase, Arlen (University of Central Florida) and Diane Chase (University of Central Florida)**

[83] *A Drought of Thought: The Maya Collapse in the Southern Lowlands*

In concert with contemporary concerns over climate change, drought has again become popularized as the reason for the collapse of Classic Maya civilization. However, the broad strokes that have been used to paint a model of drought and its consequences do not accurately reflect regional peculiarities, being based on incomplete dating and selective archaeological data. While extended drought would have impacted the Maya, it should not be posited as the primary reason for the abandonment of all Classic Period cities. Archaeological data from the central Peten and Caracol, Belize, are used to show why the pan-Maya drought model is ill-conceived.

**Chase, Arlen [169]** see Chase, Diane Zaino

**Chase, Brad (Albion College)**

[136] *Walls and Wealth: Production and Consumption in Harappan Gujarat*

With the exception of the large city of Dholavira, most Harappan settlements in Gujarat, such as Gola Dhoro and Shikarpur, are only a few hectares in total area. Despite their small size, they nevertheless suggest the existence of striking social inequalities. Most, for example, feature massive and well-planned stone and mudbrick enclosures, the construction and maintenance of which required the coordination of a significant amount of labor, i.e., the exercise of social power. This paper will explore the sources of this power through a comparative analysis of the production, distribution, and consumption of several classes of subsistence and commercial goods.

**[136]** *First Chair*

**Chase, Diane (University of Central Florida) and Arlen Chase (University of Central Florida)**

[169] *Multiple Hats: Conjunctively Researching the Ancient Maya*

Robert Sharer has been a proponent for the use of the conjunctive approach in Maya archaeology. He has successfully fostered broader archaeological insights through simultaneously involvement in both field excavation and laboratory analyses. By integrating

architectural investigations with ceramic processing in the field, Sharer championed a feed-back loop that continuously refined his research design, helping create better informed archaeological interpretations. We have borrowed and modified this strategy at Caracol, Belize. This paper showcases the benefits that accrue to archaeological interpretation through the investigator's use of "many hats" and pays homage to Robert Sharer for his foresight in pioneering this conjunction.

**Chase, Diane [83]** *see Chase, Arlen F.*

**Chatzilazarou, Demetrios [130]** *see Prevedorou, Eleni Anna*

**Chavez, Eden (CSULA)**

[93] *Speleothems as Ritual Space*

Over the last decade, cave archaeology has focused a good deal of attention on the breakage, movement and caching of speleothems within Maya caves. Additional studies have also documented the extensive incorporation of speleothems in public architecture. Recent investigations at Midnight Terror Cave in Belize encountered cave formations that were so large they contained humanly accessible space in their interior. The careful investigation of these features revealed heavy utilized and, in one case, extensive modification with architecture. Several smaller speleothem enclosures were reported at Naj Tunich indicating that this may be a previously unrecognized pattern of speleothem utilization.

**Chávez Balderas, Ximena (Proyecto Templo Mayor) and Alejandra Aguirre (Proyecto Templo Mayor, INAH)**

[38] *An Entrance to the Underworld: Functions and Meanings of an Access located to the west of the Tlaltecuhтли monolith*

A monumental entrance was discovered west of the goddess Tlaltecuhтли monolith. This access has the shape of an inverted pyramid, formed by four levels. When we explored the entrance we discovered that this space is comprised of four constructive stages or expansions, implicating that it was used for about 30 years. Thus, our calculation dates the entrance from the reign of Ahuizotl until soon after the arrival of the Spaniards. The presence of both intact and broken seals demonstrates that the space was used on different occasions. Further, the finding of three temporally distinct offerings suggests the celebration of several ceremonies of exceptional character. In this paper we will discuss the symbolism function of this ritual space, as well as the ceremonial activities that took place there.

**Chen, Maa-ling (National Taiwan University)**

[156] *Interpreting the social differentiation from Examining the House pattern and the Flow of resources: Case study in Aboriginal settlement, Southern Tip of Taiwan*

The mundane practice of daily life would be more the prime aspect within which social rules, meanings, and relations of power are embedded for social control. Meanwhile, a high degree of system (either political or economic) integration indicates a strong, centralizing, and coordinating control and constraint on the flow of resources and on the development of settlement as well as household sizes to become a hierarchical relationship. This study will focus on analyzing evidences such as the distribution of house size and shape, and the imported goods to detect the social differentiation of an aboriginal settlement, Taiwan

**Chen, Pochan (National Taiwan Univ.)**

[62] *The transformation of use and social meaning of salt in early China*

Salt has been a major financial resource in China since the Han Dynasty. For this reason, many scholars argue that the production and distribution of salt was one of the most important factors in the emergence of Chinese civilization. According to recent archaeological materials, oracle bones, bamboo slips, cloth manuscripts, terracotta bricks, and ancient texts, this presentation demonstrates that the social meaning of salt transformed from a prestige good to a more general commodity from the prehistoric period to the Han Dynasty. We should clarify these transformations before we discuss the influences of salt on contemporary cultures and states.

**Cherry, John (Brown University) and Susan Alcock (Brown University)**

[108] *Archaeology at the Margins of Several Empires: The Vortan Project, Southern Armenia*

For several years, the Armenian-American Vortan Project has been conducting archaeological research in southern Armenia, in an area that seemingly lay either at the very margins of, or just beyond, several successive imperial systems during the first millennia B.C. and A.D. — the Urartian, Achaemenid, and Roman empires. In this region, absolute chronology is still poorly resolved, ceramic traditions were extremely slow-changing, and diagnostic artifacts from imperial

centers are scarce, posing challenges to the understanding of local political identity and wider interactions. This paper discusses problems involved in understanding local sociopolitical institutions and their relationships to adjacent powers.

**Chesley, John [168]** *see* Thibodeau, Alyson M.; [168] *see* Fenn, Thomas

**Chesson, Meredith**

[8] *Good and Bad Trips: Death, Donkeys, and Details of Early Bronze Age Burial on the Southeastern Dead Sea Plain, Jordan*

During the Early Bronze Age I, on the eve of establishing fortified towns on the southeastern Dead Sea Plain, people buried their dead in secondary mortuary rituals in cemeteries at Bab edh-Dhra', Feifa, and es-Safi. While we know nothing of the living communities or their primary mortuary practices, we know the EBA people carefully collected even the smallest bones of their dead and transported them down to this area for burial in shaft or cist tombs. Drawing on ethnographic analogies and recently published skeletal analyses from Bab edh-Dhra', I explore potential anxieties attached to living and dying in these communities.

[124] *see* Wolff, Nicholas P.

**Chiarulli, Beverly (Indiana University of Pennsylvania) and R. Scott Moore (Indiana U of Pennsylvania)**

[188] *Virtual Archaeology: Public Archaeology in Second Life*

Archaeologists have effectively used the world wide web as a vehicle for public outreach for the past 15 years. As new technologies develop, new opportunities for public education also appear. Virtual reality environments like "Second Life" provide interactive experiences for the public as well as for the classroom. This presentation describes the creation of the IUP Second Life Archaeology Island. The virtual world includes sections on Roman, Maya, Late Woodland Pennsylvania, and underwater archaeological sites and can be used to orient project participants as well as provide the public with the opportunity to "virtually" travel through time.

[52] *Second Organizer*

**Chiarulli, Beverly [52]** *see* Neusius, Sarah W.

**Chicoine, David (Louisiana State University)**

[130] *Death and Religion in the Southern Moche Periphery: Funerary Practices at Huambacho, Peru*

Funerary behaviours are central social practices that potentially materialize dominant ideologies and help understand the adherence and/or resistance of communities to certain ideas. On the north coast of Peru, the first millennium AD is associated with spread of Moche religion and funerary practices. The recent discovery of middle Moche period (AD 300-600) graves from the site of Huambacho brings insights into local funerary practices in the southern Moche periphery. Data from funerary contexts, osteological remains and grave goods are analyzed to explore patterns of burial treatment, the integration of local groups into Moche religion and possible ritual specificities.

**Childs, S. (National Park Service)**

[37] *A Study of Repository Fees: Trends and Issues over a Decade*

Over the last 30 years, an increasing number of repositories across the U.S. charge for curatorial services when archeological collections are deposited with them. These fees are instituted to meet the costs of providing high-quality collections care and upholding professional standards. An informal yet systematic study of repository fees was performed in 1997/98, 2002 and, most recently, in 2007/08 to examine this movement. This paper provides current information on curation fee structures across the U.S., criteria used to establish fees, and the variability of fees. Related trends and issues over the last ten years are discussed.

[37] *First Chair*

**Chilton, Elizabeth (UMass Amherst)**

[161] *Homelands and Farmlands: Cooperation and Cohesion among Late Woodland Peoples of the Northeast*

The Late Woodland (AD 1000-1600) peoples of the Northeast U.S. included the Iroquoian-speaking tribal groups of upstate New York, and the Algonquian-speaking communities of New England. Aside from linguistic differences, Iroquoian and Algonquian peoples of the Late Woodland differed greatly with respect to subsistence, socio-political organization, and settlement. In this paper I examine these bodies of evidence for the NY Iroquois and the

Algonquian peoples of interior New England as a means to compare and contrast regional/ethnic differences in group cooperation and cohesion. Cooperation can be traced at the level of the family, clan, community, and regional political units.

[116] *Second Chair*; [116] *see Hart, Siobhan*

**Chinchilla, Oswaldo [58]** *see Safi, Kristin N.*

**Chiou-Peng, TzeHuey (Univ. Illinois UC)**

[62] *The Many Faces of Metal Kettledrums in Ancient Asia*

Hourglass-shaped kettledrums in metal materials represent a salient type of artifacts at Bronze Age sites in Southwest China and Southeast Asia. Archaeological data from Southwest China reveal that many of these drums in fact had been removed from functioning as simple noise-making instruments, in particular specimens exhibiting altered physical attributes or others seen in inverted position at the time of excavation. This paper studies such drum-shaped objects and relevant data in order to address issues regarding varied functions of Asian kettledrums in different cultural context.

**Chiynkowski, Tanya (University of Calgary) and Kari Griffith (University of Calgary)**

[101] *Preliminary Lithic Analysis from Tepetate, Nicaragua*

Excavations at the site of Tepetate, Nicaragua recovered 4000 lithic fragments from three loci. These were made of a variety of local cherts, obsidian, chalcedony and basalts. All stages of tool production were recorded, including exhausted cores and finished tools. Differences in material use by locale suggest differential access to raw material and exploitation strategies within this site. These suggest status differences at Tepetate. The stages of debitage indicate that multiple production methods were employed. These findings will be compared to other sites in the region including Santa Isabel, Nicaragua.

**Chiynkowski, Tanya [65]** *see McCafferty, Geoffrey*

**Choy, Kyungcheol [4]** *see Fuller, Benjamin T.*

**Christensen, Christian [115]** *see French, Matthew Patrick*

**Chu, Alejandro [85]** *see Coutts, Karen H.*

**Chuipka, Jason (University of Colorado)**

[144] *Making Sense of Crater Houses, Unit Pueblos, Pit Structures, and the Great House At Chimney Rock*

The Northern San Juan Basin Settlement Survey Project has recently focused attention on the area around Chimney Rock in southwestern Colorado. New data has drawn into question the temporal relationship between crater houses, unit pueblos, earthen pit structures, and Chacoan-type great house architecture. How these types of architecture relate to one other presents a picture of social complexity that informs on both the local and regional perspectives on the Pueblo II Chimney Rock community.

**Church, Timothy [40]** *see Phillips, Shaun M.*

**Cinquino, Michael A. [109]** *see Hayward, Michele H.*

**Ciolek-Torrello, Richard [10]** *see Graves, William M.*

**Cipolla, Craig (U. of Pennsylvania)**

[173] *Approaches to the appropriated: Brothertown cemetery analysis*

This paper examines gravesites of the Brothertown Indians, a Native American Christian community composed of several Eastern Woodlands groups. During the 18th century, the Brothertown began incorporating mass-produced gravestones into their burial practices, many of which bore inscriptions written in the English language. These stones replaced traditional fieldstone grave-markers by the mid-19th century. I investigate these and other shifting commemoration practices as a means of sorting out issues of social identity, pinpointing processes of ethnogenesis and cultural appropriation. I pay particular attention to Native uses of the English language (an appropriated object).



**Claassen, Cheryl (Appalachian State University)**

[128] *An Archaic Sacred Site System in the Southern Ohio Valley*

Mobile foragers of the Archaic south of the Ohio River, on the Ohio, and on the Wabash created a sacred site system that included large public feasting with shellfish ceremonial centers, bluff top shrines or mortuary camps with small feasts with shellfish, shell-free private mortuary sites, and natural loci, particularly caves and shoals. Common rituals conducted at both the artificial and natural sacred sites were world renewal rituals with human sacrifices and deposits of animal bones. One or more dog rituals were also practiced in both locations.

**Clark, Jeffery [13]** see Lyons, Patrick D.; [18] see Hill, Brett

**Clark, Joelle (Northern Arizona University) [57]** *Discussant*

**Clark, Lindsey and Andrew I. Duff (Washington State University)**

[18] *Analysis of Design Attributes as a Measure of Interaction within a Chacoan Community*

Attributes of ceramic design have been used to assess patterns of residence within settlements and the degree of interaction among households within and between communities. We present an exploratory analysis of decorated pottery design attributes from Cox Ranch Pueblo, a Chaco era (A.D. 1050-1130) great house community in west-central New Mexico. We use the degree of similarity in design attributes by household as one measure of interaction, and compare this to form, type and ware data from the same contexts. These data provide additional insights into intra-community interactions during the Chacoan period.

**Clark, Terence (University of Toronto)**

[118] *Marpole Redefined: Integrative Archaeology of a Northwest Coast Culture*

The Marpole culture of the Gulf of Georgia region of the Northwest Coast is one of the most cited examples of prehistoric complex hunter gatherers in North America. Despite a hundred years of archaeological inquiry the generally accepted definition of Marpole is still little more than a laundry list of artifact types. This paper presents a redefined view of Marpole, created using the framework of Integrative Archaeology. This comprehensive reworking takes into account technology, economy, language, worldview, art and geography. In this case, the rise of social complexity can be seen in the growing integration of Marpole culture.

**Clayton, Sarah [108]** see Crider, Destiny Lynn

**Clements, Joyce (Gray & Pape, Inc.)**

[116] *Widows, Winding Sheets, and Cultural Transformation in Southern New England*

Using historical documents to illuminate material culture and social behavior, this presentation examines a community of 17th and 18th century Native Americans from the Praying Indian Town of Ponkapoag, Massachusetts. The texts exemplify cultural transformation in progress and expose social relations unimagined in the previous century. The Ponkapoag example reveals skillful Native American cultural bilingualism and a pragmatic accommodation to colonial legal and economic systems. By navigating colonial social structures and establishing relations with the colonists Ponkapoag people remained on their land well into the nineteenth century and transformed their culture in a way that guaranteed their survival.

**Clish, Andrew [9]** see Birch, Jennifer

**Clites, Elizabeth (Monticello Department of Archaeology), Fraser Neiman (Monticello Department of Archaeology), Joanne Bowen (Department of Archaeological Research, Colonial Williamsburg Foundation) and Karen Smith (Monticello Department of Archaeology)**

[53] *Dynamic Diets: New Insights into Faunal Resource Use at Monticello Plantation*

Recent reanalysis of faunal assemblages from Thomas Jefferson's Monticello provides new insights into the dietary patterns of both owners and enslaved workers in the late-18th and early-19th centuries. Assemblages from Mulberry Row slave dwellings and from the Western Kitchen Yard adjacent to the main house were analyzed in light of artifactual and contextual data generated by the DAACS project. Intriguing patterns emerged that in some ways diverge from those of the greater Chesapeake. Here, we explore these patterns as well as their relationship to changes in provisioning systems and shifts in agricultural practices at Monticello and the Chesapeake region.

**Clottes, Jean (ICOMOS)**[84] *Dating the Chauvet Cave Art*

Since its discovery in December 1994, the art of the Chauvet Cave (France) has become famous for its mastery and its sophistication. The initial radiocarbon dates obtained in 1995 (ca.31,000BP) placed it within the Aurignacian. This went counter the current paradigms about the supposed evolution of Pleistocene art from crude beginnings in the Aurignacian to more and more sophistication in later cultures. It thus gave rise to some controversy -which has never stopped- as to the validity of the 14C dates. The scientific team at work at Chauvet has pursued different lines of research to establish when the cave could be and was actually frequented by both humans and bears: geology (dating the collapse of the cliff that sealed the entrance; studying the evolution of the cave surfaces), paleontology (the bears in the cave and their possibilities of getting into it), dating of the calcite covering archaeological levels, dating of torch marks on the walls, dating of the images themselves, study and dating of the charcoal on the ground, intercomparison study by several laboratories to test the validity of the radiocarbon datings obtained, etc. After the collective work thus carried out during a decade, we can assert that the art of the Chauvet Cave is one of the best -if not the best-securely dated in the world.

**Clouse, Robert (University of Alabama)**[82] *Engendering Military Site Archaeology*

Military sites operate on a strict hierarchical structure historically conceived of as a male habitué. Military sites are typically interpreted as a male domain. The view of the feminine gender in such a setting is either one of near invisibility or in a subservient role as officers' wives, laundresses or camp followers. The archaeological collections and historical records from Fort Snelling, Minnesota have helped define social and functional distinctions within a military context and enhance our understanding of gender and class. Fort Snelling data suggest that expectations based on task differentiation must be interpreted on the basis of specific historic contexts rather than the use of generalized models based on assumed gender universals.

[104] *Discussant*Coate, Emily [53] *see Cook, Robert***Cobb, Allan and James Brady (California State University, Los Angeles)**[93] *An Assessment of Cultural Modifications in Midnight Terror Cave*

While only about half of the archaeological survey has been completed for Midnight Terror Cave, the speleological assessment conducted by the senior author has been finished for most major areas. This assessment noted widespread modification of the cave, particularly in the demarcation of routes of travel. This includes creation of steps, leveling of paths and the creation of stone pathways. Other modifications appear to be aimed at creating broad, flat areas that would accommodate large numbers of people. The magnitude of the modifications suggests that labor had to have been recruited on a large scale.

Cobb, Allan [93] *see Shaw, Leslie C.***Cobb, Charles (South Carolina Inst of Ar) and Dawnie Steadman (Binghamton University)**[177] *Mississippian sieges and diseases: fetishizing the epidemiological transition*

Studies of structural violence indicate health disparities are normalized through their embedding in social structures. Mississippian-period health disparities in North America have been broadly consigned to an "epidemiological transition" linked to the adoption of agriculture. Uncritically accepted, this view elides the historical actions that propagate disease, thereby making it seem inevitable. Representational and osteological studies show that Mississippian warfare transformed the periodic threat of physical violence into a chronic setting of structural violence, manifested by infectious and non-infectious stressors. This duality of violence was institutionalized through seemingly contradictory embodied practices that valorized warfare yet instilled a dread of bodily defilement.

[14] *Discussant* [177] *Second Organizer***Cobb, Hannah (University of Manchester, UK)**[96] *Middens, Movements, Materials and Identities: Disclosing person, place and practice in the Mesolithic of the northern Irish Sea basin*

In this paper I will examine how Heidegger's notion of disclosure may be of value for interpreting past material practices. Such an approach moves beyond a biographical stance by exploring how objects show up and how they gather the world around them. In particular I will demonstrate the value of this approach by using the case study of the Mesolithic period in the northern Irish Sea

basin. Here such an analysis enables us to move beyond traditional functional and economic studies and instead explore the complicated intersection of place, materials, material practices and the production of identity at different scales.

**Codding, Brian (Stanford University), Douglas W. Bird (Stanford University) and Rebecca Bliege Bird (Stanford University)**

[145] *What's in an abundance index: ethnoarchaeological insights from Martu foraging*

Archaeological investigations into human-prey interactions frequently examine diachronic trends using abundance indices (AI), or ratios of large bodied prey relative to small bodied prey.

Assuming that prey body size serves as a proxy for post-encounter return rate (whether the currency is calories or prestige), a change in AI represents a change in foraging return rates resulting from variation in the abundance of large prey. Utilizing a combination of ecological and ethnoarchaeological data from the Western Desert of Australia, we test the validity of using abundance indices as proxy measures of prey abundance.

**Cogswell, Lucy**

[36] *The Jade Standard: An Examination of the Principle Prestige Good in the Middle Preclassic of the Mayan Pacific Lowlands*

This paper shall focus upon the role of jade in the pre-classical site of La Blanca. The site of La Blanca has long been a source of fascination while studying the political cycling of the area, as archaeologists have considered its nascent role on the Pacific Coast. This look at the use of jade as currency in the households can help us gleam insight into the period, as well as gain considerable comprehension on the use of the principal prestige good of the Pacific Coast of Guatemala.

[36] *First Chair*

**Cohen, Anna [74] see Deskaj, Sylvia**

**Cohen, David (University of California-Berkeley)**

[174] *Histories of Injustice on the Fringe of the Kgalagadi, Botswana*

Archaeological interpretation often “speaks” for those that no longer have a voice or find themselves silenced. This project—an investigation of the complex relationships between foragers and farmers on the fringe of the Kgalagadi desert in southeastern Botswana over the past few thousand years—is an attempt to speak for subaltern groups in the past and present. Archaeological analyses and oral traditions reveal the complex contact relationships that developed, and serve to empower groups in the present, as history shows a richly colored past that stands in contrast to accounts of minority group histories in the present.

**Colaninno, Carol (University of Georgia)**

[46] *Late Archaic Paleoeconomy of St. Catherines Island*

Archaeological investigations at the St. Catherines Shell Ring (9Li231), a Late Archaic (4500-3000 B.P.) shell formation on St. Catherines Island, Georgia, yielded large amounts of vertebrate faunal. Currently, 37,664 specimens have been identified including an estimated 1,069 individuals. These data provide new evidence of the Late Archaic paleoeconomy, which was dominated by the use of estuarine fishes. Measurements of selected archaeological fish elements provide information about the size of fishes captured and elaborate upon the fishing activities of the St. Catherines peoples.

**Cole, Ethan (UCLA)**

[15] *A Northern Moche Paradox: The Absence of Warfare Imagery in the San Jose de Moro Finesline Substyle*

Despite the presence of fortified Late Moche sites that dot the Jequetepeque Valley, imagery directly related to warfare is lacking in the local painted ceramic tradition, which has recently been termed the “San Jose de Moro substyle.” Although many sites are characterized by having strategic locations, defensive walls, and sling stones, this regional Moche art style provides few images of human combat. I propose that this relates to a unifying function of the San Jose de Moro substyle's iconographic scheme, through which a focus on supernatural content allowed a loose confederacy of Northern Moche groups to participate in communal rituals held at the Jequetepeque's ceremonial center, San Jose de Moro.

**Coleman, Magen (University of Missouri), J. David Robertson (University of Missouri), Jeffrey Ferguson (University of Missouri), Michael D. Glascock (University of Missouri) and Stanley Ambrose (University of Illinois)**

[49] *Further Studies into the Geochemistry of Obsidian from Kenya*

Although compositional studies of obsidian from Kenya conducted during the 1980's showed great potential, a comprehensive database has not been developed. African archaeology is vital to an understanding of the origins of modern humans, and such a database would be useful to study the movements and interactions of the peoples who lived in this region. In this study, we examine artifacts and geological samples from Kenya via X-ray fluorescence and neutron activation analysis to test our ability to distinguish between individual sources. The results thus far are quite promising and work continues to create a complete database for Kenyan obsidian.

**Coleman, Robin [185] see Hageman, Jon**

**Collard, Mark (Simon Fraser University), Andre Costopoulos (McGill University), Briggs Buchanan (Simon Fraser University) and Jesse Morin (University of British Columbia)**

[179] *Risk and hunter-gatherer toolkit structure in northwestern North America*

It has been suggested that the diversity and complexity of hunter-gatherer toolkits increase as risk of resource failure increases. Here, we report a study that tested this hypothesis with data from 16 hunter-gatherer groups living in two geographically close but environmentally contrasting regions of North America, the Northwest Coast and Plateau. Because the Plateau has lower species richness and a more extreme climate than the Northwest Coast, our expectation was that the Plateau groups' toolkits would be significantly more diverse and complex than those of the Northwest Coast groups. The results of the analysis were not consistent with this prediction.

**Collins, Antoinette (Richard Stockton College), Richard Regensburg and Sandra Bierbrauer (Richard Stockton College of New Jersey)**

[53] *Salvage Squared: Analysis of Salvaged Artifacts from the Warner Farm Site in Burlington County New Jersey*

This paper exemplifies the amount of valuable cultural information gleaned from salvage archaeology operations. Material recovered from the Warner Farm prehistoric site, Burlington County, NJ, permitted interpretation using artifacts, maps, reports, soils and geological data. Paleo-Indian, early through late Archaic, and late Woodland cultures used this site. The nearby prehistoric Koens-Crispin and Savich Farm sites contain unusual mortuary practice information. Aboriginal late Archaic inhabitants of the Warner Site shared similar cultural attributes. This study's importance is heightened by the rapid rate of development and archaeological site destruction in NJ.

**Collins, Lori (University of South Florida) and Travis Doering (University of South Florida, College of Arts and Sciences, Alliance for Integrated Spatial Technologies)**

[126] *Monuments and Sculpture: a proposed workflow for the documentation of Mesoamerican heritage*

Carved stone monuments and sculpture long out of the ground or recently discovered face variable permanency of over time. Threats include natural processes, such as erosion, acid rain, pollution and root intrusion. Other, cultural or anthropogenic factors are also factors, such as vandalism, graffiti, and looting. All of these processes decrease the visibility of an object or monument, or make them impossible to fully document and appreciate for the future. Using numerous examples from Guatemala and Mexico, the authors discuss a proposed workflow for complete documentation that uses best available technologies to preserve and present archaeological heritage.

**Collins, Lori [99] see Doering, Travis F.; [163] see McCoy, Elizabeth C.; [174] see Penders, Thomas E.; [183] see Mcleod, Bart**

**Collins, Matthew [118] see Solazzo, Caroline**

**Collins, Michael (Gault School) and Michael Collins (Gault School of Archaeological Research)**

[89] *Clovis Living Floor, Area 12, Gault Site Texas*

A stratigraphically isolated Clovis component, circa 5 cm in thickness, at the Gault Site, Texas, manifests patterned distributions of stone and bone artifacts on and around a gravel platform. This is interpreted as the result of a very brief period of domestic use.

**Collins, Michael [89]** *see Collins, Michael B.*

**Colón, Marínés [172]** *see Rodríguez Ramos, Reniel*

**Colonese, André (Spanish National Research Council (IMF – CSIC)), Edgard Camaros (Laboratori d'Arqueozoologia, Departament de Prehistòria, Universitat Autònoma de Barcelona, 08.193, Bellaterra, Spain), Ester Verdun (Laboratori d'Arqueozoologia, Departament de Prehistòria, Universitat Autònoma de Barcelona, 08.193, Bellaterra, Spain) and Jordi Estévez Escalera (Laboratori d'Arqueozoologia, Departament de Prehistòria, Universitat Autònoma de Barcelona, 08.193, Bellaterra, Spain)**

[85] *Integrated Archaeozoological Research Of Shell Middens: New Insights Into Yamana Coastal Exploitation In The Tierra Del Fuego (Argentina)*

Past hunter-gatherer-fisher settlement patterns in extreme environmental conditions involve appropriated management of resources at temporal and spatial scales. The archaeological coastal sites of Yamana groups in the Beagle Channel (Tierra del Fuego) provide rich evidence of resource exploitations. Ethnographic documentation is also available making them a rare case study to investigate the adaptation of hunter-gather-fisher communities to high latitude environments. We report the first results of the complementary study of faunal remains and shellfish oxygen isotopes from the latest Yamana coastal sites, Tunel VII and Lanashuaia (18th and 19th centuries). Results highlight different occupation episodes at the seasonal scale.

**Coltman, Jeremy**

[64] *Sustainers of the World: Sky Bearers, Pauhtuns, and Bacabs in Mesoamerica and the American Southwest*

A common cosmological notion in ancient Mesoamerica was the idea of four sky bearers, each assigned a specific color and direction, who had the important duty of holding the firmament securely in place. In Late Postclassic Central Mexico these were the sky bearers appearing in the Borgia and Vaticanus B codices. To the Classic and Postclassic Maya, they were known as the Bacabs and closely related Pauhtuns. Directional wind and rain gods were also closely related and similar directional conceptions are found among the Pueblo and Navajo of the American Southwest.

**Colwell-Chanthaphonh, Chip (Denver Museum of Nature & Science)**

[112] *The Sacred and the Museum*

Since the formation of museum anthropology in the United States, scholars have been interested in collecting Native American objects of religious and spiritual significance. For many years, these objects predominately served scientific inquiry and public curiosity, but over the last three decades we have become increasingly aware of how Indigenous communities continue to value these objects despite their radical re-contextualization. This paper will explore the ongoing spiritual life of sacred objects in museums, focusing particularly on how some Native American groups perceive ritual items against the backdrop of NAGPRA and repatriation.

**Comer, Douglas (Cultural Site Research and Management (CSRM)) [186]** *Discussant*

**Compton, John (University of Exeter)**

[114] *Storage, Pottery Production, and Community Organization at Late and Terminal Classic Las Canoas, Northwestern Honduras*

Excavations in a densely settled portion of Las Canoas revealed four diminutive, closely spaced platforms employed as work and storage areas by artisans who fabricated ceramic vessels on a moderately large scale. The complex and interlinked construction histories of these buildings are examined for the light they shed on changes in the practice and importance of pottery production in the political economy of this center from the 7th through 10th centuries AD. Attention is also directed to the possible significance of these shifts for understanding Las Canoas' changing place in inter-societal exchange networks.

**Compton, Jonathan (University of Georgia)**

[98] *Big Game Hunting in the Central Mississippi Valley*

Ethnohistoric accounts and historic records indicate that wolf, black bear, mountain lion, elk, white-tailed deer, and American bison were all once present in the Central Mississippi Valley. But a survey of archaeofaunal data from 65 Woodland and Mississippian sites from the Central Mississippi Valley and adjacent regions indicates that only the white-tailed deer was intensively targeted by native groups. The paper examines patterns of big game use in the Central Mississippi Valley and surrounding areas and discusses factors that may contribute to the low

representation of large-mammalian species other than white-tailed deer in the archaeological record.

[98] *First Chair*

**Condon, Peter (TRC Environmental) and Maria E. Hroncich (TRC Environmental)**

[176] *An Assessment of Late Puebloan Socio-Economic Dynamics in the Trans-Pecos Region. Excavations at 41EP1623, El Paso County, Texas*

Displacement of puebloan populations and resettlement into small autonomous communities after A.D. 1300 reflects a cultural process accelerated by intra-annual changes in precipitation and resource incongruence. As such, the movement from regionally aggregated polities located along alluvial settings to the low-lying environment of the Hueco Bolson is interpreted as a shift in social and economic dynamics within the Trans Pecos region. Excavations carried out at 41EP1623, a puebloan settlement in El Paso County documents the resettlement of small communities back into a once heavily occupied region of the Chihuahuan Desert. This change in settlement and an increased reliance on non-domesticated foods may relate to a decrease in seasonal rainfalls and an increase in resource incongruity across the region.

**Condon, Peter C.** [176] *see Condon, Peter C.*

**Conklin, Carolyn** [130] *see Pereira, Carlos M.*

**Conlee, Christina (Texas State University), Matthew T Boulanger (University of Missouri) and Michael D. Glascock (University of Missouri)**

[130] *1500 Years of Pottery Production on the South Coast of Peru: Neutron Activation of Pottery from the site of La Tiza*

Pottery from the site of La Tiza was analyzed using Neutron Activation to examine changing patterns of production over 1500 years. Beginning in the Early Horizon (100 BC) a variety of materials were used and production appears unspecialized. In the Early Intermediate (AD 1-750) the majority of polychrome pottery was made from a single clay source indicating centralized production. During the Middle Horizon (AD 750-1000), when the Wari state integrated parts of Nasca, the clay sources changed and there were new zones of production. After the collapse of Wari, there was a return to sources used in the Early Intermediate.

**Connell, George** [34] *see Cooper, Judith R.*

**Connell, Samuel (Foothill College), Ana Lucia Gonzalez (University of Hawaii) and Chad Gifford (Columbia University)**

[162] *Pushing The Intellectual Envelope: Independent Student Learning Module In The Pambamarca Project, Ecuador*

Students on the Pambamarca Archaeological Project field school are required to conduct original research and submit final papers. Independent projects provide students with the historical and sociopolitical context of their fieldwork experiences and challenge them on many levels. Intellectually it is the first time many of the students connect primary data to original interpretations. And emotionally the students must be doing academic work amidst so much activity and foreignness. Our rewards are many, with new avenues for research opening up, incredible student return rates, and an empowered staff who instruct while conducting graduate work.

[191] *First Chair*

**Connell, Samuel** [191] *see Gifford, Chad*

**Connolly, Robert (University of Memphis)**

[82] *The Development of Prehistoric Earthwork Form & Function from the Middle Archaic to the Woodland in the Eastern Woodlands of the United States*

This paper traces the development of prehistoric earthworks in the Southeastern United States from their genesis at nearly 5000 years B.P. through the manifestations of the Mississippian Cultures to 700 years B.P. Although an evolution and continuity in earthwork form is traced throughout the expanse of time, a shifting spatial function is explored based on the positioning of earthwork elements, construction materials, and associated activity areas. The implications for eliciting detail of the associated social, political, and economic organization of the prehistoric American Indian cultures across the 4000 years is discussed.

**Connor, Melissa (Nebraska Wesleyan University)**

[28] *Professionalism in forensic archaeology: Transitioning from 'cowboy of science' to 'officer of the court'*

Forensic science is science applied to the law. To be effective forensic scientists, archaeologists need to learn what constitutes the elements of the crimes they might deal with, how to create documentation for court and how to qualify as, and be, an expert witness. They may also deal with many types of artifacts, or evidence, not normally found on an archaeological site. This presentation takes a forensic case example from the initial call to the archaeologist by the police to the courtroom and highlights the similarities and differences between anthropological archaeology and forensic archaeology. Forensic archaeology is a sub-discipline that requires not only a strong background in archaeological fieldwork, but additional training in the forensic sciences.

**Consuegra, Susana [91]** *see Diaz-del-Rio, Pedro*

**Contreras, Daniel (Stanford University) and Nicholas Tripcevich (U.C. Berkeley)**

[168] *Research at the Quispisisa obsidian source in the central Peruvian highlands*

Obsidian of the Quispisisa type has been found at many sites in central and northern Peru, both coastal and highland. These sites are widely spread in space and time, found as much as 800 linear km from the source and dating back to the early Pre-ceramic. Our recent exploration revealed that the source extends over a much larger area than previously reported. Moreover, our work found that the source area contains several large quarry pits. This preliminary research both documented these features and geochemically characterized geologic samples from the larger source area to investigate sub-source variability.

**Conway, Meagan (UMass Boston) and Ian Kuijt (University of Notre Dame)**

[174] *Life During the Irish Famine: Perspectives on Community and Household Organization at Streamstown Village, Co. Galway*

Despite the central role of abandoned stone houses as visual manifestations of the 19th century famine in western Ireland, remarkably little research has focused on the social and economic context of their occupants. The material record of the famine, as exemplified by these structures, is rapidly disappearing as destructive elements, natural and human, direct and indirect, expedite their deterioration. Drawing on fieldwork and archival research, this poster focuses on the vernacular architecture at Streamstown village, a well-preserved 18th and 19th century ridge-top settlement near Clifden, Co. Galway, to understand transitions in household and community spatial organization.

**Cook, Della C. [5]** *see Ausel, Erica*

**Cook, Katherine [124]** *see Michelaki, Kostalena*

**Cook, Robert (Ohio State University) and Emily Coate (Ohio State University)**

[53] *Looking for Houses in all the Right Places? Fort Ancient Architecture at the Wildcat Site, Dayton, Ohio*

Archaeological fieldwork at the Wildcat site has begun to uncover architectural remains, broadening our view of settlement structure variability of the Fort Ancient culture of the Middle Ohio Valley. Magnetometry and excavation data are used to delineate residential areas, architectural forms, and spatial arrangements. Two distinct structure types are present, one being more substantial than the other with interior pit features. Seasonal differences and rebuilding are explored as hypotheses to account for this variability. We conclude with a preliminary interpretation of the site's temporal and social structure, as well as its relationship to other Fort Ancient sites.

**Cook, Robert [53]** *see Deppen, Jacob E.*

**Cooney, Gabriel (UCD School of Archaeology), Aimeé Little (UCD School of Archaeology, University College Dublin), Graeme Warren (UCD School of Archaeology, University College Dublin) and Thomas Kador (UCD John Hume Institute for Global Irish Studies/School of Archaeology, University College Dublin)**

[91] *An overview of stone axe quarry, extraction and related sites in Ireland*

Coverage of the literature of prehistoric extraction sites for stone axe production in Ireland has been dominated by discussion of the two known sources for porcellanite axes. Using the database and context of the Irish Stone Axe Project these quarry sites will be placed in the wider

context of other quarries discovered over the last two decades. The wider international implications of these sites for our understanding of prehistoric stone extraction and axe production and the role of stone extraction and use in the Mesolithic/Neolithic transition will be discussed.

**Cooper, Judith (SWCA), George Connell (SWCA Environmental Consultants), Michael Cregger (SWCA Environmental Consultants) and Norma Crumbley (SWCA Environmental Consultants)**

[34] *Brush Fences and Human Landscape Use in the Piceance Basin*

Brush fences are archaeological features commonly found in western North America and served in numerous capacities in the past, including as prehistoric game traps, Native American horse corrals, historic sheep control features, and historic fence lines. As a result, in the absence of associated diagnostic traits, it is difficult to assign age or function to these features. Here, we analyze brush fences identified in the Piceance Basin and explore their variability in topography, morphology, and method of construction. We compare our sample to brush fences recorded elsewhere to better understand their function and offer approaches for differentiating brush fence types.

**Cooper, Judith [34]** see *Cooper, Judith R.*

**Cooper, Leslie [99]** see *Galle, Jillian E.*

**Copeland, Katie [31]** see *Owens, Stephanie*

**Cordell, Linda (School for Advanced Research) and Judith Habicht-Mauche (University of California, Santa Cruz)**

[13] *Practice Theory and Social Dynamics among Prehispanic and Colonial Communities in the American Southwest.*

Beginning in the late 1200s, the differential spread of shared aspects of ceramic technology over broad areas of the American Southwest signify complex and shifting networks of communication, interaction and population movement. New understanding of the social and political contexts within which this pottery technology developed is explored through practice theory, which focuses on choices made by potters and by recent research on geological sources, exchange networks and stylistic continuities. This symposium features new and deeper understanding of social dynamics among communities in the late prehispanic and colonial Southwest.

[66] *Discussant*

**Cornejo, Lorena [130]** see *Arriaza, Bernardo T.*

**Coronel, Eric (Brigham Young University), Chelsea Katseanes (BYU), Daniel Bair (BYU), Eric Coronel (BYU), Rachel Bair (BYU)**

[100] *An Ethnographic study of Soil Geochemical Signatures of Butchering Activities at the Contemporary Maya Village of Telchaquillo, Yucatan*

The central plaza at Telchaquillo, Yucatan, has been the place of traditional butchering activity for many generations. Weekly killing, butchering and meat sales take place on a rock outcrop at the northwest corner of the plaza. A butchering post stands at the center of the outcrop but there are no artifacts, bones, or other evidences of the activity. The intense decomposition in the warm, moist soils of Yucatan precludes the identification of organic biomarkers of blood and lipids in archaeological contexts, but minerals like phosphorus, iron and other heavy metals accumulate in the soil and may provide evidence of butchering activities. We will present the results of soil chemical analyses of samples from Telchaquillo and from a modern game butchering area at Range Creek Ranch, Utah.

**Coronel, Eric [100]** see *Coronel, Eric*

**Costanza, Robert (University of Vermont)**

[1] *Sustainability or Collapse: What Can We Learn from Integrating the History of Humans and the Rest of Nature?*

Discussion of the Integrated History and future of People on Earth (IHOPE) initiative.

[1] *Discussant*



**Costion, Kirk (University of Pittsburgh) and Ulrike Matthies Green (University of California San Diego)**

[45] *Responding to the Colonization of the Moquegua Valley: the changing of Huaracane identity through the selective adoption of colonial traditions*

Indigenous to the Moquegua Valley, Huaracane small-scale agriculturists inhabited this region when Wari and Tiwanaku colonies were established in the valley. This paper explores strategies employed by Huaracane communities in order to adapt to the presence of large-scale colonial settlements in their territory. Utilizing data from the Huaracane site of Yahuy Alta and the Huaracane/Wari site of Cerro Trapiche, it will be demonstrated that the Huaracane were not passive recipients of colonial material culture and/or traditions. Instead, Huaracane communities strategically incorporated certain aspects of Wari colonial culture into their traditional society ensuring their continued existence in a new multicultural landscape.

[45] *Second Chair*

**Costion, Kirk E. [45]** see Green, Ulrike M.

**Costopoulos, Andre [143]** see Hulse, Eva L.; [179] see Collard, Mark

**Cottier, John (Auburn University)**

[82] *Shadows on the Walls: the roles of fortification systems in the Cairo Lowlands*

The landscape of the Cairo Lowlands of southeast Missouri contains major earthmoving cultural features associated with mounds and fortification systems. A major importance in the archaeology of the Mississippian is an understanding of the functions of these works. In specific an understanding of the general cultural dynamics responsible for the creation of the fortification systems has been debated but still remains largely unresolved. Suggestions for furthering discussions concerning power and control are presented.

**Coughlan, Michael (University of Georgia)**

[129] *Optimal Burning Theory: Anthropogenic Fire, Ecological Productivity, and Population*

Anthropogenic landscape fire provides an important parameter for understanding human-environment relations through time. Previous fire history studies posit relationships between fire regimes, culture, and population density. This paper contributes to these efforts by framing the relationship between anthropogenic fire and population density as subsistence intensification/extensification constrained by political economy, climatic variability, and ecological potential. Effective anthropogenic fire yields desired two results: (1) increased productivity and (2) decreased risk. This framework hypothesizes that functional anthropogenic fire practices balance population requirements and political economic demands with potential ecological productivity while mediating social and ecological risk.

[129] *First Chair*

**Coulson, Sheila (University of Oslo)**

[67] *Ritualized Behavior in the Middle Stone Age: Evidence from Rhino Cave, Tsodilo Hills, Botswana*

Tsodilo Hills, Botswana's World Heritage Site, is known as the Mountain of the Gods. The aptness of this title was recently reconfirmed when recent archaeological investigations in a hidden cave revealed this site was used for ritualized behavioral practices during the Middle Stone Age. This includes the intentional destruction of vividly colored spearheads, the filling of natural cracks in the cave wall, the use of colorants and the intentional modification of a large rock outcrop. Grooves and depressions were ground into this rock panel--a spalled section was found in association with grinding stones within the MSA deposits.

**Coupland, Gary (University of Toronto)**

[118] *Hierarchy, Communalism, and Transegalitarian Foraging Practices: Some Northwest Coast Examples*

The complex hunter-gatherers of the Northwest Coast practiced communal foraging, but they did so within hierarchical social structures that emphasized household and even individual ownership of resources. In this paper, I look at three examples of Northwest Coast communal foraging: Straits Salish reef-netting, Nuuchahnulth whaling, and Tsimshian eulachon fishing. I argue that the various practices associated with each of these foraging activities simultaneously reinforced principles of social hierarchy and communalism. I suggest further that the inherent tensions between hierarchy and communalism were negotiated and, to a certain extent, resolved at these facilities.

[118] *First Chair*

**Coutts, Karen (University of Florida), Alejandro Chu (Proyecto Arqueologico Bandurria-Huacho) and John Krigbaum (University of Florida)**

[85] *Inferences of social complexity in Preceramic Period (3000-1800B.C.) Peru revealed through isotopic analyses at the Bandurria site.*

Bandurria is a large Preceramic Period (3000-1800B.C.) site located on the Peruvian coast with monumental architecture and implicit social complexity. To explore this social complexity, stable isotopes of carbon ( $\delta^{13}C$ ) and nitrogen ( $\delta^{15}N$ ) are used to reconstruct paleodiet while differences in isotopes of oxygen ( $\delta^{18}O$ ) strontium ( $^{87}Sr/^{86}Sr$ ) and lead (Pb) provide information about human migration. These data are compared with data from contemporaneous sites to clarify the role of coastal adaptations in the rise of social and monumental architectural complexity in Preceramic Peru.

**Couture, Nicole (McGill University), Deborah E. Blom (University of Vermont), Dennise Rodas S. (Unidad de Museos Municipales, La Paz, Bolivia), Eduardo Machicado (Universidad Mayor de San Andres, La Paz, Bolivia) and Ruth Fontenla (Universidad Mayor de San Andres, La Paz, Bolivia)**

[12] *What are they doing with their dead? Local mortuary practices at Mollo Kontu, Tiwanaku*

Drawing on a series of recently excavated burials in the Mollo Kontu sector at Tiwanaku, we suggest that the concept of the formal cemetery, as a specialized and spatially discrete burial area, may not be appropriate for the site of Tiwanaku itself; we also question the notion of a "typical" Tiwanaku burial. We propose, instead, that mortuary activities in this area must be understood not only in terms of differences in social identity (including age, gender, class, and ethnic affiliation), but also vis-à-vis the specific local history of the Mollo Kontu neighborhood and broad changes in Tiwanaku's urban landscape.

**Couture, Nicole [12] see Pokines, James T.; [81] see Blom, Deborah E**

**Cowan, Ellen [80] see Seramur, Keith**

**Cowgill, George (Arizona State University) [86] Discussant [108] Discussant; [115] see Sload, Rebecca**

**Cox, Christina (University of Virginia)**

[191] *Cosanga ware at the Pambamarca Archaeological Project*

This paper uses ceramic analysis to look at trade in a pre-Incan chiefdom in northern Ecuador. Cosanga ware, which is believed to be a trade ware from the eastern lowland based on chemical analysis, was investigated at two sites excavated by the Pambamarca Archaeological Project. The paper attempts to compare Cosanga found at a Late Intermediate site to that found at a later site in order to investigate Cosanga trade through time, and to ask questions about Inca impact on local trade.

**Cox, Kim [84] see Boyd, Carolyn E.**

**Crabtree, Pam (New York University)**

[96] *Anglo-Saxon Landscape Use in the Lark Valley: Evidence from West Stow and Icklingham*

The early Anglo-Saxon site of West Stow (ca. 450-720 CE) is one of the most thoroughly excavated Anglo-Saxon settlements in Britain. Analysis of the faunal remains from West Stow has been used to study early Anglo-Saxon animal husbandry patterns, hunting practices, and diet. These data can also be used to understand how the early Anglo-Saxons utilized and perceived the landscape of the Lark River Valley. Comparisons with the faunal remains from the late Roman site of Icklingham will allow us to trace changes in landscape use in the Lark Valley from the late Roman to the early Anglo-Saxon period.

[96] *First Chair*

**Craib, Donald (Lilley Legal Team, PLC) [159] Discussant [159] First Moderator [159] Second Organizer**

**Craig, Douglas (Northland Research)**

[87] *Residential Architecture and Cultural Identity in the Prehispanic Southwest*

Residential architecture is one of the most common and visible archaeological data sets. It is also one of the most informative data sets for addressing issues of cultural identity, because traditional methods and styles of house construction tend to be both conservative and enduring—a way of doing things that gets passed down from one generation to the next with little change. This paper

reviews evidence for the emergence of culturally distinctive architectural traditions in the prehispanic Southwest. The nature of cultural interaction at the regional and macro-regional levels will also be discussed based on architectural evidence.

**Craig, Nathan (Pennsylvania State University), Luis Flores Blanco (Pennsylvania State University) and Mark Aldenderfer (University of Arizona)**

[119] *An inventory and analysis of the Qochas (reservoirs) in the Rio Ramis, Peru.*

Qochas are a precolumbian landscape agricultural feature about which very little is known. Though there are thousands of these reservoirs visible on the landscape of the northern Lake Titicaca Basin, qochas have yet to be systematically and quantitatively researched. Using a combined approach of GPS and remote sensing, we present the first systematic inventory of qochas attempted in Peru. We report the total number of qochas in the study area and identify spatial patterning both in the location of qochas on the landscape and in their association with archaeological sites of specific temporal periods.

**Craig, Nathan S. [30]** see Haas, Wm. Randall

**Cranford, David (UNC-CH)**

[56] *Separating Church and State: Rethinking Mississippian Ideology and Politics in the Northern Caddoan Area*

Owing to various attempts to explain the development, maintenance, and diversity of Mississippian societies, the notion of what 'Mississippian' is has become inextricably linked with but a single type of political strategy: hierarchically organized chiefdoms. In this paper I argue that while centralized political leaders likely played a significant role in many Mississippian communities, the Mississippian ideology itself was not inherently tied to any particular political strategy. A critical reexamination of data from two neighboring mound sites in eastern Oklahoma casts doubt on the presence of chiefly hierarchies in the Northern Caddoan Area despite obvious connections and similarities with the wider Mississippian southeast.

**Creamer, Winifred (Northern Illinois University), Edward Jakaitis (Northern Illinois University), Jesus Holguin (Universidad Nacional Mayor San Marcos) and Jonathan Haas (Field Museum)**

[85] *Far from the Shore: The role of Marine Resources in the Late Archaic (3000 to 1800 B.C.) Norte Chico Region of Peru*

There are numerous agricultural sites with monumental architecture dating to the Late Archaic Period (3000-1800 BC) in the Norte Chico region of Peru. Testing at 13 of these yields few remains of terrestrial animals and substantial quantities of fish bone and marine invertebrates. Though it appears that marine resources provided the protein in most people's diet, we compare midden contents to look at the variability between sites near the coast and those further inland. The evidence shows that these are basically agriculturally based societies who balanced their diet by relying on the rich marine resources from the adjacent Pacific Ocean.

[116] *Discussant*

**Creekmore, Andy (Colorado State University)**

[86] *The social production of space in third millennium cities of Upper Mesopotamia*

The cities of third millennium Upper Mesopotamia are variously described as "organic" or "highly planned," and assigned to type categories based on their general shape and structure. This approach fails to capture the pathways of urban development. In contrast, I analyze these cities through the lens of a life history approach that emphasizes how various stakeholders participate in urban planning at multiple levels within the city. Over time, local planning episodes, combined with centralized planning, creates a collage of urban spaces that maintains conservative notions of the social production and construction of space.

[86] *First Chair*

**Creel, Darrell [76]** see Speakman, Robert J.

**Cregger, Michael [34]** see Cooper, Judith R.; [34] see Phillips, Scott C.

**Cressler, Alan [109]** see Simek, Jan F.; [67] see Blankenship, Sarah A.

**Crews, Christopher (Texas A&M University)**

[18] *Flagstone Floors and Hearths in the Archaic Upper Rio Grande Valley*

The Piedra Lumbre basin is located in northwest New Mexico. Within this basin lies the 22,000+

acres of Ghost Ranch, an area once frequented by artist Georgia O'Keefe and archaeologist Florence Hawley Ellis. Recent excavations at the rock shelter site known as GR-2 have revealed the presence of a flagstone floor dating to the middle archaic and flagstone hearths with dates spanning the entire archaic period. These features are discussed and considered in the context of how archaeologists manage the concepts of "semi-sedentary" and "seasonal" use of arid area rock shelters.

**Crider, Destiny (Arizona State University) and Sarah Clayton (Arizona State University)**

[108] *Teotihuacan, Tula, and the View from the Texcoco Hinterlands*

The central highlands of Mexico offer an excellent geographic setting for the archaeological investigation of cycles of state development and reorganization. Taking a long-term perspective, we present archaeological data from the small regional center of Cerro Portezuelo during the height of the successive expansionary states of Classic Teotihuacan and Early Postclassic Tula. Comparison of ceramic assemblages, mortuary practices, and architectural data between these regional capitals and Cerro Portezuelo reveals contrasting patterns of participation in imperial socio-political and economic activities for each state's development. By taking a diachronic perspective, this study contributes to an improved understanding of the varied perceptions, responses, and strategies of hinterland residents under conditions of political subordination.

**Crock, John (University of Vermont) and David R. Watters (Carnegie Museum of Natural History)**

[106] *For the Love of Shellfish: Contributions to the Study of PreColumbian Maritime Adaptations in the Eastern Caribbean*

James B. Richardson's love of island life, past and present, and passion for the archaeology of ocean-going and ocean-dependent peoples have helped shape the study of preColumbian populations in the small islands of the Eastern Caribbean. His guidance and advice have influenced the investigation and interpretation of the full sequence of human occupation in the region, from colonization to Contact and research questions ranging from the role of the environment to the development of complexity.

**Crock, John [150]** *see Shearn, Isaac*

**Cross, Sarah (Purdue University), Gabe Bowen (Purdue University - West Lafayette) and Kevin Vaughn (Purdue University - West Lafayette)**

[130] *Animal Management Strategies in Early Nasca: Faunal and Isotopic Analysis*

In this paper we describe an analysis of faunal remains from rural Nasca settlements. Multiple strategies of camelid herd maintenance may have been practiced during the Early Nasca Period, including herding at the local village, herding in the puna, and transhumance. Isotopic analysis of carbonate and collagen samples from the faunal assemblage provides data on camelid diet and herding altitude. This research adds insight to the complexity of early Nasca lifeways, including herding practices, trade, and ecological complementarity.

**Crossland, Nicole [44]** *see Prentiss, Anna Marie*

**Crossland, Zoë (Columbia University)**

[141] *Breaking the bounded self: apotropaic devices in 17th century England*

Interpreting the breaking of images within the frame of iconoclasm is to endow the act of breakage with a negative moral valuation. Iconoclasm is implicitly understood as a form of violence. Iconoclasm opens up the possibility to deepen and widen our understanding of why people make and break objects. This paper turns to 17th century England to discuss the breaking of apotropaic devices made from common and mass-produced Bartmann jugs. These 'witch bottles' demonstrate the power of the broken image to articulate anxieties over bodily integrity in the context of the coming into being of a bounded sense of self.

**Crumbley, Norma [34]** *see Cooper, Judith R.*

**Cubbon, Emily (Univ. of North Carolina)**

[66] *Charged Chaco: Exploring Chacoan Power and Organization Through Cosmological Symbolism of Turquoise Colors in Ritual Caches*

Recently, many Chaco scholars have argued convincingly for strong ritual components to power and organization in the Chacoan world. However, specific details crucial for a fuller understanding of the Chaco Phenomenon are often left unaddressed. In order to approach this gap, I use an anthropological perspective employing concepts of cosmology, ancestor construction, and social

memory to suggest that turquoise/blue-green colors were symbolic of commonly cited elements of a "Chacoan ideology" (such as sacred directionality, cyclical renewal, and center place). I explore and interpret the implications of the use of turquoise in Chacoan ritual caches for organization, power, and legitimization.

**Cueni, Lara [44]** see Goodale, Nathan B.

**Culleton, Brendan [83]** see Prufer, Keith M.; [130] see McClure, Sarah B.

**Cummings, Linda (Paleo Research Institute)**

[176] *Synergy: The Whole is Greater than the Sum of the Parts*

Reconstructing past lifeways requires multiple and sometimes extraordinary analyses. To rely upon single lines of evidence is often to ignore important parts of our prehistory. Establishment of a paleoenvironmental record, along with records of people's choices for food, is essential to understanding daily life. Archaeology is more than our finds of lithics and ceramics, and records of lipids, pollen, seeds, phytoliths, and other debris, whether perishable or durable. Examples of the synergy of multiple lines of evidence provides a more comprehensive understanding of the diet and people's lives, such as analysis of Mesa Verde mugs, FCR for organic residue, etc.

[176] *First Chair*; [176] see Gear, W Michael

**Cunningham, Jerimy (University of Lethbridge)**

[32] *The Santa Clara Survey - Results from the 2007 & 2008 Seasons*

In this poster, I outline the results of archaeological surveys conducted during 2007 and 2008 in the Santa Clara Valley of Chihuahua, Mexico. Pedestrian surveys along first and second terraces of the river between Santa Clara and Ortega identified over 50 new sites, including archaic lithic scatters and several moderately-sized Medio Period occupations, including two fortified hilltop sites and one I-shaped ballcourt. In general, settlement along the valley seems related to the presence of low-lying agricultural terraces and freshwater springs.

**Cunningham, Kevin (Delaware Dept of Trans.), Michael Petraglia (University of Cambridge), Rama Das (Sanganakal) and Ravi Korisetar (Karnatak University)**

[188] *Public Outreach in India: An Example from the Kurnool District, Andhra Pradesh*

Over three field seasons in Kurnool District, India, a public outreach campaign was conducted. Goals were to educate the public about their prehistoric heritage and to build trust with local communities where we conducted fieldwork. This was informal and developed by Indian and foreign archaeologists (UK, US and Australia). Outreach was in villages of Pathapadu, Jwalapuram, and Kottala where we have been conducting open-air, rockshelter and cave excavations. Challenges included barriers of language and social customs. Activities included a brochure in Telugu, teaching and conducting interviews about their history and use of the landscape. Villagers responded by aiding in fieldwork, protecting sites, assisting with identification and interpretation of sites, including rockart. Media covered our archaeological research, highlighting culture heritage and current destruction of sites.

**Curet, L. (The Field Museum) and William J. Pestle (University of Illinois at Chicago)**

[150] *Determining the Marine Reservoir Correction of Radiocarbon Dates for Southern Puerto Rico*

Marine reservoir correction of radiocarbon dates is a necessary procedure that can alter traditional chronologies and culture histories. Archaeologists working in the Caribbean have yet to fully account the potential changes brought about by this correction. We present herein new AMS dates of charcoal and associated shell samples from the site of Tibes, Ponce, Puerto Rico, which have been used to calculate an appropriate local offset from the global marine carbon calibration curve ( $\Delta R$ ). The effects of the use of marine reservoir correction and this appropriate local  $\Delta R$  on interpretations of several aspects of Puerto Rican prehistory are also discussed.

[150] *First Chair*

**Curewitz, Diane (Washington State Univ.) and Sheila Goff (University of Colorado Museum of Natural History)**

[13] *The Right Ingredients: Southern Cerrillos Hills Lead in Paint on Pajarito Plateau-Produced Glaze-Painted Pottery*

Early and intermediate glaze-painted pottery production research generally focuses on the Albuquerque region and the Galisteo Basin, respectively. Most potters in these regions used southern Cerrillos Hills lead in their glaze paint, bypassing other sources. Recent temper studies and stable lead isotope analysis indicated that the glaze paint used on Pajarito Plateau pottery

contained lead from the southern Cerrillos Hills. Our study expands the number of sites and glaze-paint pottery types examined to further support the use of lead from the southern Cerrillos Hills by Pajarito Plateau potters, and to demonstrate their participation in a larger community of practice.

**Curewitz, Diane [37]** *see Collins, Mary B.*

**Currey, Timothy (Am Samoa Power Authority), Phillip Johnson (American Samoa Power Authority) and Timothy Currey (American Samoa Power Authority)**

[147] *GIS and Public Archaeology in American Samoa: Recent Applications by the American Samoa Power Authority*

Section 106 compliance in the U.S. territory of American Samoa began over 20 years ago on the island of Tutuila, and has since become the predominant impetus for archaeological inquiry in Samoa. In 1999 the American Samoa Power Authority developed the first local archaeology program. In the past decade ASPA has been a primary agent for both CRM and GIS in the territory. ASPA utilizes GIS to coordinate and catalog internally, and to interface with external shareholders in the public and private sectors on-island and abroad. This poster presents recent GIS applications by ASPA towards public archaeology in the territory.

**Currey, Timothy [147]** *see Currey, Timothy P.*

**Curtis, Matthew [107]** *see Arthur, John W.*

**Cushing Flint, Shirley [171]** *see Flint, Richard*

**Cushman, David (SRI Foundation) [79]** *First Chair* [79] *First Moderator*

**Cushman, R. Dustin (Temple University) and R. Michael Stewart (Temple University)**

[116] *Mortuary Practices and Social Complexity in the Delaware Valley of the Middle Atlantic Region*

Late Woodland and Contact/Historic period mortuary practices are summarized and provide a perspective on community and regional social organization and interaction. While the native peoples of the Delaware Valley are believed to have lived in autonomous bands made up of extended families, mortuary rituals were probably set at the clan or tribal/macro-band level. Some cemeteries or burial areas may have been shared among these bands indicating that funerals may have brought neighboring bands together. This perspective is compared and contrasted with inferences derived from settlement and community patterns, subsistence practices, and data related to exchange and group interaction.

**Cutright-Smith, Elisabeth, Kacy Hollenback (University of Arizona) and Wendi Field Murray (University of Arizona)**

[157] *A Discipline in Transition: A Quantitative Assessment of NAGPRA's Impacts on American Anthropology*

The passage of NAGPRA in 1990 gave archaeology newfound social and political relevance. This legislation mandated repatriation of human remains and certain objects found on federal or tribal lands to culturally affiliated descendant communities, as well as those items in the possession of agencies and museums receiving federal funding. Nineteen years later, we still do not have a clear picture of how this legislation has changed the discipline in terms of method, theory, or practice. This paper seeks to understand the magnitude and direction of these changes through a quantitative content analysis of major journals and SAA abstracts.

**Cutrone, Daniel (California State University Los Angeles)**

[115] *Mesoamerica and the Southwest: Mutually Supporting and Conforming Approaches*

Southwestern cave archaeology has evolved since 2002 relying heavily on Mesoamerican models and studies. The Mesoamerican paradigm emphasizes the use of ethnography for insight into prehistoric ideologies. This presentation demonstrates that the Southwest and Mesoamerica shared not only similar ideologies about sacred landscape and the importance of origin mythology but also similar strategies for materializing these ideologies in the lives of the prehistoric inhabitants. This paper focuses particularly on use of landscape in relationship to the selection of settlement location.

**Cyr, Howard [146]** *see Dawson, Peter C.*

**Czaplicki, Jon (Bureau of Reclamation)**

[103] *The Naked Truth About the Naked Archaeologist*

The History International cable channel presents *The Naked Archaeologist* as a show that goes behind the scenes to get at the truth about various questions and controversies in Biblical Archaeology today. The show's host travels to Israel, Egypt, and Greece trying to uncover the truth about a particular problem, talking with various experts to separate fact from fiction. Who is the Naked Archaeologist and does the show really deliver what it claims? Is it fact or fiction?

**D Alpoim Guedes, Jade, Jean Pierre Bocquet-Appel (CNRS, Paris, France) and Stephan Naji (CNRS, Paris, France)**

[156] *Testing the Hypothesis of a Neolithic Demographic Transition in China*

A Neolithic Demographic Transition has been detected in paleo-anthropological data from cemeteries in Europe, the Middle East and North America. Although China has long been recognized as a major primary center for agriculture, the timing, effects and the pace of the adoption of agriculture in this region are still poorly understood. This paper examines the demographic signal derived from an intensive sampling of Holocene cemeteries in China in the light of new archaeo-botanical and archaeological data from the region.

[156] *First Chair*

**D'latchenko, Vladimir [70]** see *Enloe, James G.*

**da Silva, Graziela [26]** see *Evans, Amanda M.*

**Dahlin, Bruce [86]** see *Magnoni, Aline*; [100] see *Bair, Daniel*

**Dahlin, Eleanor [75]** see *Heckman, Robert A.*

**D'Altroy, Terence (Columbia University)**

[141] *Killing Mummies*

Why bother killing a mummy? This paper explores the political implications of Inka views of sentience and power, in which humans and various forms of consciousness were inhabitants of the world. People, clippings from their bodies, and their mummies were seen as living icons of dividual personas in which human consciousness resided. Within this conceptual framework, the Inkas were highly selective in what could or ought to be represented in tangible form and thus what could be manipulated physically or even destroyed. It is argued that the apparent severity of Inka materiality is explicable because 1) power was resident in various living forms, and 2) iconic representations rendered their subjects susceptible to malign forces."

**Dambach, Katie (UMass Amherst)**

[173] *Decolonizing Archaeological Shellfish: A View from southern New England*

Shellfish remains are abundant in numerous archaeological contexts throughout southern New England, yet archaeologists rarely interpret them as more than food debris and waste. Archaeologists seldom question the role(s) these ecofacts might have had within past Native societies. We may be able to decolonize and broaden our understandings of shellfish use by working with contemporary Native peoples, thus freeing our interpretations of non-native bias and baggage.

**Dambeck, Rainer, Alan Lord (Senckenberg Forschungsinstitut und Naturmuseum Frankfurt am Main), Heinrich Thiemeyer (Goethe-University Frankfurt am Main) and Nico Herrmann (Universität Leipzig)**

[138] *Holocene floodplain evolution of the Sizandro valley (Portugal) – Part 1: Chronology and sedimentology*

The sediment record of the Sizandro valley provides high potential for palaeoenvironmental reconstruction. Drillings in the floodplain proved the existence of almost 25 m thick fluvial and lacustrine deposits. The strata set have been accumulated mainly after 5500 BP. This can be resumed using multi-proxy borehole data. Since we could prove agriculture for Neolithic times, it is highly probable that human impact played a crucial role for sediment delivery.

**Daneels, Annick (IIA-UNAM Mexico)**

[92] *Reflections on formative identity in Central Veracruz: the "provincial olmecs" from the lower Cotaxtla basin*

Olmec ethnic identity has been a hotly debated subject for many years. Arguments from archaeology and linguistics have been increasingly enriched, and allow analyzing several lines of

evidence. The purpose of this paper is to evaluate a variety of formative data from the lower Cotaxtla basin, in coastal south Central Veracruz, Mexico, contrasting them with surrounding regions of southern Veracruz (the so-called nuclear olmec region), western south-central Veracruz (slopes of the Pico de Orizaba) and north-central Veracruz (beyond the olmec "sphere"), in order to approach the subject of cultural vs ethnic identity in a region bordering the olmec heartland.

[92] *Discussant*

**Daniels, James (CSULB & ASM Affiliates)**

[58] *Using Distributional Archaeology and GIS to Determine Functionality of Subsurface Structures Detected with Geophysics at El Baul*

The integration of multiple sets of data including geophysical data, surface collection data and data collected with a GPS into a GIS software program provides for dynamic spatial and associative analysis when examining the archaeological record. ArcGIS provides tools that allow you to overlay multiple types of data and compare them spatially and statistically. Correlating distributions of surface artifacts with the spatial orientation of subsurface features detected with geophysical instrumentation such as ground penetrating radar (GPR) and magnetometry provide a test for hypotheses concerning the frequency and distribution of artifact classes and the information that they provide about the function of a particular area of archaeological interest. The integration of multiple kinds of data sets in GIS is employed in this study in order to determine the relationship between the distribution and densities of surface artifacts and possible structure detected with geophysical instruments. I collected the data from an area of archaeological interest known as El Baul in Santa Lucia Cotzumalguapa, Guatemala. Data recovered from survey with both GPR and Magnetometry was used to identify the location of possible subsurface structure foundations. Areas of interest were then divided into 5 x 5 m grids and artifacts within each grid were sorted and counted. The grids locations as well as the location of large rocks within the grids were recorded using GPS. A topographic map was also generated with the GPS. Each of these datasets was then imported into ArcGIS and correlated using statistical and spatial analysis tools to determine the relationship between the distribution of artifacts on the surface and the structures detected in the subsurface.

**Danien, Elin (Univ. Pennsylvania Museum) and Ronald Bishop (National Museum of Natural History/Smithsonian Institution)**

[149] *Beyond the local: archaeological vestiges of interregional contact*

In his research in the Honduran, Salvadorian and Guatemala highlands, Robert Sharer has sought to define not only patterns of local development but also provide objective evidence for interregional interaction. Prominent among these efforts has been his incorporation of data derived by neutron activation. The analytically-based results have ranged from detail indication of manufacturing sources for tomb lots to tantalizing indications of long-distance contacts involving individual artifacts. Aspects of these previous and ongoing studies will be presented.

**Darley, Zaida (zaidadarley) and Philip Reeder (University of South Florida)**

[99] *Understanding Bajos in Mesoamerica*

In the Maya Lowlands of Mexico, Guatemala, and Honduras, wetlands, known locally as bajos, were used as sources of food and water by the prehispanic inhabitants of the region. Archaeologists describe bajos as seasonal swamps containing marsh-like vegetation. Yet, swamps and marshes represent two different kinds of wetland features, each providing different natural resources. My research compares characteristics of bajos and other water-holding depressions found in Mesoamerica to wetland categories used by the U.S. Environmental Protection Agency to differentiate the kinds of natural resources available to ancient inhabitants and to explore potential implications of wetland variation for prehispanic human adaptations.

**Darras, Véronique**

[91] *Obsidian mining in pre-Hispanic Mesoamerica*

Mesoamerica contains many lithic raw materials including obsidian, which appeared as one of the major resource used by pre-Hispanic populations to make tools. During Preclassic (circa 1500 B.C.), obsidian use was widespread in several regions, and the systematic exploitation of the most important deposits can be related to the development of large distance trade and specialized craft productions. Archaeological studies highlight complex mining systems but the modern exploitation of several of the deposits destroys gradually the pre-Hispanic remains. The paper presents the available data about pre-Hispanic mines and quarries, focusing on the field work methodology and the nomenclature used.



**Darwent, Christyann (U of California, Davis) [146]** *First Chair*, [146] *see LeMoine, Genevieve*

**Darwent, John [146]** *see LeMoine, Genevieve*

**Das, Rama [188]** *see Cunningham, Kevin*

**Daughtrey, Cannon (Statistical Research Inc.), John Hall (Statistical Research Inc.) and Michael Heilen (Statistical Research Inc.)**

[43] *Spatial Organization of Tucson's National Cemetery: Determining the Use of Space Through Historical and Archaeological Evidence*

Tucson's National Cemetery was used by a multi-ethnic community whose burial practice drew from multiple cultural traditions. The cemetery was divided into civilian and military sections, but ethno-historical and archaeological evidence suggest the possibility of other divisions as well. A fascinating result of fieldwork was patterned variation in the spatial organization of grave features and their attributes, suggesting a correlation between some cemetery areas and particular groups or traditions. In this paper we integrate historical and archaeological evidence to infer the organization of the cemetery and discuss the implications of space use in understanding the organization of the local community.

**David, Francine [70]** *see Enloe, James G.*

**Davidson, Matthew (University of Kentucky)**

[148] *Using Auger Testing to Understand Residential Site Structure Beyond the Dwelling*  
Archaeological and ethnoarchaeological research has demonstrated that a more complete understanding of residential activities requires the investigation of large surface areas beyond dwelling structures where a variety of activities take place. To investigate these areas at the site of Tres Zapotes, horizontal/block excavations in potential dwelling areas have been paired with systematic transects of auger tests radiating outward into the residential periphery. The results of the auger testing program are discussed to evaluate its ability to enhance our understanding of residential site structure where multiple crafting activities took place.

**Davidson, James [54]** *see Teague, Megan A.*

**Davies, Diane (Tulane University)**

[192] *Reuse of a Late Preclassic Residential Group at the Maya Site of San Bartolo*  
The Preclassic Maya site of San Bartolo was reoccupied around A.D. 600, and there is evidence that abandoned structures and monuments were reused by these later settlers. Studying the reuse of architecture, associated features, and artifacts can shed light on how the past was manipulated to express the needs and values of later peoples. Preliminary excavations in a residential group at the site suggests that the settlers reused the group for religious and/or political reasons. Motivations behind structure reuse reflect complex and varied attitudes to the past and may provide a glimpse into how the Late Classic Maya perceived their predecessors.

**Davila Cabrera, Patricio (INAH)**

[111] *Los Estilos huastecos en la Arqueología de México.*  
El estilo, para los arqueólogos, consiste en reconocer las características que agrupan algunos objetos o motivos e inferir alguna afinidad que distingue algún segmento cultural. Actualmente el término estilo se usa con diversas aplicaciones, oímos que existe: Música estilo huasteco, zapateado estilo huasteco, altar de muertos estilo huasteco, etc. Con similar displicencia, en los textos sobre la arqueología de esta región, encontramos frases como: Pectorales estilo huasteco, escultura estilo huasteco, figurillas estilo huasteco, arquitectura estilo huasteco, etc. El estilo excede la expresión de una comunidad, trata un ámbito mayor. Buscaré organizar, en lo arqueológico, la terminología concerniente al "estilo huasteco"

**Davis, Ivan (Statistical Research Inc), Andy Bean (Statistical Research Inc) and John Hall (Statistical Research Inc)**

[43] *The Statistical Research, Inc., Database (SRID): Flexible Integration of Large Diverse Datasets*

The large size and complexity of the Joint Courts Complex project presents the formidable technical challenge of managing enormous quantities of data in a flexible manner. The project recorded more than 37,000 artifact inventories, 30,000 proveniences, and 1,900 features. Managing these data required a system responsive to procedural improvements, large numbers of discoveries, evolving analytical goals, and daily reporting needs. This paper discusses how

flexibility and integration were achieved by linking multiple data categories—discovery units, features, proveniences, artifact inventories, osteological remains, on-site storage locations, and visual media—in a data management system that is both functional and efficient.

**Davis, Jeremy (University of Alabama)**

[42] *Crafting in the Countryside: A Comparison of Three Late Prehistoric Nonmound Sites in the Black Warrior River Valley*

Centralized control of resources by elites has been identified as the basis of institutionalized inequality in complex societies. This paper compares the lithic assemblages of three late Moundville III-early Moundville IV phase nonmound sites in the Black Warrior Valley to assess the Moundville political-economy model's expectations concerning the distribution of exotic stone and craft production locales. It is found that neither exotic material nor the production of socially valued goods such as pendants and paint palettes was confined to the regional center during the latter part of the chiefdom's history. This discovery is interpreted in terms of a decentralized ritual economy.

**Davis, Katharine (Harvard University), Gino Lopez Bejarano (Universidad Mayor de San Andres) and Israel Manzaneda Atea (Universidad Mayor de San Andres)**

[119] *Of Herds and Households: the relationship of an urban residential population with camelids during the Classic Tiwanaku Period, Muru Ut Pata, Bolivia*

The years AD 800-1000 saw a change in the face of the Middle Horizon site of Tiwanaku as an influx of population into the center from the surrounding valley areas caused new spaces around the monuments to be settled for residential occupation. Though urbanization often signals the separation of urban versus pastoral activities necessitating meat-provisioning, Classic Tiwanaku populations kept close contact with the herds. In the case of the Muru Ut Pata area, maintaining pastoral activities provided residents not only with the primary and secondary products of camelid herds but with diverse economic opportunities in terms of trade.

**Davis, Loren (Oregon State University), Justin Bach (Oregon State University), Samuel Willis (Oregon State University) and Steve Jenevin (Oregon State University)**

[47] *Ethologically based approaches to modeling early prehistoric site distribution in Baja California*

Prediction of archaeological site distribution in Baja California is greatly needed to facilitate the discovery of prehistoric sites. Ethological modeling of herbivore productivity in Baja California's Central Desert is described and discussed. Results of pluvial, early Holocene, and middle Holocene models are compared against the limited archaeological dataset. This methodological approach represents a suitable means of operationalizing contextual aspects of a paleopeninsular period and tradition and illustrates how critical changes in late Pleistocene to middle Holocene environments of the Central Desert reorganized the subsistence resource base. These changes paved the way for a rise in plant exploitation during the Archaic period.

[47] *Third Organizer*

**Davis, Loren [47] see Gusick, Amy E.**

**Davis, Margo (Boston University)**

[153] *Insights into Quartz Selection and Use from Caddy Park*

Despite the ubiquitous use of quartz cobble technology across southern New England during the Late Archaic and beyond, quartz's flaking properties make it difficult to tell if an informally-shaped piece of quartz is an artifact or not. At Caddy Park, a red ochre feature from Quincy, Massachusetts showing a confusing mixture of technological and cultural traditions, close to 100 in situ, minimally-altered quartz blanks were discovered. This collection provides valuable insight into the selection process and human alteration of quartz stockpiled for later use, as well as to the people who made this feature.

**Davis, Rich (Fort.A.P.Hill)**

[160] *Fort A.P.Hill Public Outreach at Site 44CE0551*

During 2008, the Fort A.P.Hill, Virginia, Cultural Resource Management team with the assistance of volunteers, performed Phase II excavations at 44CE0551 as part of the Public Outreach section of the Alternate Mitigation efforts. Site 44CE0551 is the late 19th - early 20th century domestic farmstead formally occupied by Richard Carter, who had been relocated by the U.S. Army in 1941. Through the efforts of the Oral History Program conducted by A.P.Hill CRM, decedents of former area landholders, including the great grandson of Richard Carter, were contacted and invited to participate in the investigations.

Davis, Stephen Jr. [14] *see Riggs, Brett H.*

Davis, Valerie [90] *see Matternes, Hugh B.*

Davison, Faith [173] *see Bendremer, Jeffrey C.*

**Davis-Salazar, Karla (University of South Florida) and E. Christian Wells (University of South Florida)**

[114] *Socio-natural Patterns and Processes of Community Integration in the Palmarejo Valley, Honduras*

In archaeological studies of communities in Mesoamerica, attention is mostly paid to reconstructing and understanding the social aspects of community integration. Far less work has been done to discern how the biophysical environment shapes and shifts human interactions in communities over time. In this paper we discuss our research in the Palmarejo Valley of northwestern Honduras, which examines the ways and extent to which communities were integrated by micro-watersheds. Data from settlement survey, excavation, pottery analysis, and geoarchaeological research suggest that quebradas and their changing impacts to local landforms played a crucial role in community form, function, and identity.

Dawdy, Shannon (University of Chicago) [137] *Discussant*

**Dawson, Peter (University of Calgary), Calla McNamee (University of Calgary), Howard Cyr (University of Calgary), Matthew Walls (University of Toronto) and Peter Dawson (University of Calgary)**

[146] *Landscapes Shared and Contested: Tracing Proto-Athabaskan and Inuit Land Use in the Southern Keewatin District of Nunavut*

Archaeologists comparing the adaptiveness of Chippewyan Dene and Caribou Inuit subsistence/settlement systems have argued that among the Caribou Inuit, the concepts of relatively permanent winter occupations, subsistence on stored foods, and the construction of features and facilities, were derived from practices brought inland from the coast, and whose origins lay in their Thule ancestry. However, recent archaeological research in the southern Keewatin indicates that the ancestors of the Chippewyan Dene may have overwintered north of the treeline in well-constructed semi-subterranean houses. We examine how this discovery challenges previously held ideas about First Nations and Inuit patterns of land use and occupancy in this region.

Dawson, Peter [146] *see Dawson, Peter C.*

**De Anda Alaniz, Guillermo (Universidad Autonoma De Yucatan)**

[115] *The Cenote Cult in the Center of Yucatan. Material Expressions*

Some of the results and interpretations of the recent field work of the Cenote Cult Project are presented here, along with the methodology employed to find the caves and cenotes related with the ancient cult that took place in this systems of the center of Yucatan. According to the presence of archaeological material and cave modifications in this area, the cult belongs to a very old tradition, which lasted until very late times in the Center of Yucatan.

**De La Rosa, Carla (New South Associates, Inc) and Hugh Matternes (New South Associates, Inc.)**

[172] *Human Remains from PO-29*

Human Remains from PO-29 were encountered in a variety of locations, but were removed largely from two burial areas. An examination of these skeletal materials was designed to elicit cultural aspects of their life and treatment after death, as well as biological responses to their environment. While preservation precluded an extensive biometric evaluation of the remains, age, sex and quality of life data were drawn for the assemblages and contrasted by burial area. The most comprehensive data available were recovered from the oral environments. Several individuals exhibited intentional cranial deformation which may be related to social differentiation within these communities.

**De León, Jason (University of Washington)**

[73] *Obsidian Use at Early Formative San Lorenzo-Tenochtitlán, Veracruz, Mexico: Testing Political and Domestic Economy Models*

Obsidian may have been a key component of the political economies of Early Mesoamerica. Some suggest that emerging elites attempted to control access to both imported obsidian and

prismatic blade technology during this period. However, few systematic attempts have been made to test these hypotheses. This study presents data from a technological analysis of obsidian from the Olmec site of San Lorenzo. The findings of this research do not support a political economy model for obsidian acquisition or use. The data suggest that obsidian procurement and tool production at San Lorenzo were major components of the domestic economy.

**De Lucia, Kristin (Northwestern University)**

[166] *Domestic Economies and Regional Transition: Household Production, Consumption, and Everyday Life in Xaltocan, Mexico*

I examine the changing role of production and exchange within household economies during the development of a regional center at the Postclassic site of Xaltocan, Mexico. I use multiple lines of evidence to explore economic and social change within a household complex to better understand the role of ordinary households in the rapid growth of Xaltocan's political economy. By emphasizing the importance of the household as a unit of analysis, I argue that we can tease apart variation in commoner economic strategies and trace their relationship to developing market economies such as in the Postclassic Valley of Mexico.

**Deagan, Kathleen [55]** see Wallace, Antoinette B.

**Dean, Rebecca (University of Minnesota-Morris)**

[130] *Barnacle Consumption in the Portuguese Neolithic*

Although barnacles are a delicacy in some parts of the world, they are seldom recognized as a food source by English-speaking archaeologists. *Pollicipes pollicipes*, a species of peduncular barnacle, is widely eaten along the Atlantic coast of Europe today and is common in some prehistoric faunal assemblages. Using an example from the site of Rocha das Gaivotas, Portugal, this poster explores the potential usefulness of barnacle remains in answering larger questions about the context of social and economic change during the Neolithic in southwestern Europe.

**DeBlasis, Paulo (Museu de Arqueologia-USP) and Paulo C. F. Giannini (IG-Univ. de São Paulo)**

[85] *Dynamics and interaction of geological and archaeological processes in the Southern coast of Santa Catarina, Brazil*

Joint archaeological and geological investigations about the sambaquis (shellmounds) culture (8-1 kyBP) of the southern Brazilian coast have shown intense interaction between natural and anthropic events as regards site formation processes. Diverse and sometimes very complex depositional sequences have been carefully scrutinized from integrated sedimentological, taphonomical and human agency perspectives. This methodological marriage between geo and archaeological approaches has been fruitful in dealing with the interpretation of recurrent and incremental mound building activities and their occupational contexts into dynamic and changing coastal environments.

**DeBlasis, Paulo [94]** see Fish, Paul R.; [165] see Gaspar, Maria Dulce

**Deetz, John (Time Team America)**

[69] *Time Team America: TV Program as Public archaeology*

The Ethics or mission statements of the SAA, SHA, RPA, and Department of the interior all include the responsibility of research archaeologists to make their findings accessible to the public. With the work done for the first season of Time Team America, there were multiple publics and stakeholders to consider beyond the TV viewers. This paper examines the Television program in the context of Public Archaeology.

[69] *First Chair*

**deFrance, Susan (University of Florida) and Michelle LeFebvre (University of Florida)**

[99] *New Records of Guinea Pig Remains from the Lesser Antilles*

Guinea pig remains are identified previously in archaeological contexts from sites on Puerto Rico and nearby islands, the northern Lesser Antilles, and Curacao. This poster documents new records on guinea pigs from archaeological contexts on Carriacou in the Grenadine Islands and St. Lucia; both in the Lesser Antilles. We use this introduced South American domesticate to examine possible travel and trade routes in the Caribbean. The contexts of these Lesser Antillean guinea pig remains also provides insights into how these animals may have used in the Caribbean and whether they represent high status remains or everyday food.

**Deibel, Michael [71]** *see Stovel, Emily*

**Delmas, Michelle [34]** *see Barnes, Zonna*

**DeMaio, Justin**

[52] *Investigating Loyalhanna Chert Procurement in Late Woodland Monongahela Sites*  
Loyalhanna chert is one of the major local chert types used for stone tool manufacture by the Late Woodland Monongahela in the Conemaugh/Blacklick watershed of southwest Pennsylvania. This chert is found in abundance at many local sites in this time period, yet only one source has ever been recorded. This poster examines the chert types in four Late Woodland Monongahela site assemblages excavated by IUP. The goal of this analysis is to determine if the proportion of Loyalhanna chert follows a "down-the-line" model such that the percentage will decrease as the distance from the source increases.

**DeMaio, Justin A. [33]** *see McArdle, Germaine F.*

**Demarest, Arthur (Vanderbilt University)**

[149] *Closing the Ancient Maya Gap: 1999-2008 Research on the Great Highland-Lowland Corridor*

One consistent theme in Robert Sharer's work has been exploration of the nature and impact of highland-lowland interaction in the ancient Maya world. Building on that tradition, the Cancuen Regional Archaeological Project investigated the sites of the valley and river corridor that runs from the full highlands north of Coban and Salama to the Peten lowland frontier port city of Cancuen. By finally closing the highland/lowland gap, we are able to specify shifting mechanisms and patterns of affiliation, the opening and closing of barriers of resistance or influence, and the fossilization of interregional interaction in the internal structure of frontier centers.

[83] *see O'Mansky, Matt*

**Dematte, Paola (RISD)**

[84] *The petroglyphs of Helankou (Ningxia, western China)*

The Helankou petroglyphs are concentrated on the cliffs and stones near the entrance of a gorge. Additional engravings are further up the gorge where other archaeological remains have been discovered. The signs include faces or masks (a design which connects this site with the tradition of faces/masks of Inner Mongolia and North and Central Asia), animals and a few inscriptions in Xixia script which reference Buddhism, a religion that was practiced in the area which is close to the 10th century Baisikou Pagoda. The different amount of weathering on the engravings indicates that petroglyphs were produced over considerable time.

**Dennett, Carrie (University of Calgary)**

[101] *Hecho en el Pacífico de Nicaragua: Identifying Locally Produced Ceramics and Evidence for Exchange at Tepetate (N-GR-10)*

Long understood to have been a major Chorotegan site at the time of Spanish contact, Tepetate is perhaps best known for the numerous ceramic figurine molds recovered there. Believed to have been an important centre for figurine manufacture, this site provides a unique archaeological resource for the study of pre-Columbian ceramic production and, potentially, economic exchange. Archaeometric analysis of ceramic figurine molds, monochrome utilitarian wares, and ceramic production "wasters" recovered during 2008 excavations at the site allow for identification of local paste types and subsequent investigation of Tepetate ceramic distribution within Pacific Nicaragua and beyond.

[101] *see Bromley, Kent*

**Densmore, Julie [53]** *see Nagaoka, Lisa*

**Deppen, Jacob (University of Washington) and Robert Cook (The Ohio State University)**

[53] *Deer Utilization and Environmental Change at Three Fort Ancient Sites*

This project analyzed samples of deer remains at three Fort Ancient habitation sites in Dayton, Ohio that date to consecutive periods in the late A.D. 1200s and A.D. 1300s. The goal of the study was to assess whether the assemblages exhibited differing indicators of stress that could be associated with environmental degradation of the region (more apparent in A.D. 1300s). Functional and seasonal differences were explored using utility indices, aging profiles, and element representation. Results show an increase in the number of juvenile deer represented and an increase in low utility elements over time coincident with deteriorating environmental conditions.

**DePratter, Chester** [14] *Discussant*; [94] *see Thompson, Victor D.*

**Derr, Kelly (Washington St. University), Colin Grier (Washington State University), and Patrick Dolan (Washington State University)**

[175] *Shaping the Past: Interpreting Landscape Management in the Gulf Islands of British Columbia, Canada*

The application of geoarchaeological methods to the study of human landscape modification has been an area of growing interest, particularly with respect to prehistoric agricultural practices. However, less attention has been given to long-term hunter-gatherer landscape management. This is specifically the case with long-term land use on the pre-contact Pacific Northwest Coast. By combining geoarchaeology and palynology, natural and anthropogenic influences on the local environment can be gleaned. Sediment cores recovered from the Shingle Point site on Valdes Island in southern British Columbia provide data that sheds light on the extent to which prehistoric peoples engaged and shaped their local landscapes.

[175] *Second Organizer*

**Derr, Kelly** [85] *see Grier, Colin*; [175] *see Dolan, Patrick*

**Derry, Linda (Old Cahawba)** [120] *Discussant* [120] *Second Chair*

**Des Lauriers, Matthew (Cal State Univ Northridge)**

[47] *The Pre-contact Villages of Isla Cedros: Patterns and Processes.*

In Baja California, one of the dramatic challenges to models of marginality and isolation is the presence of village sites with abundant house features on Isla Cedros. These sites provide a stark contrast to models which infer that the Peninsula was occupied solely by mobile bands of desert foragers. Evidence for interaction both between island communities and with the mainland challenges notions of economic and social isolation. Finally, both archaeological and ethnohistoric evidence present an image of complex social interactions that provide models for the emergence of both regional networks as well as communities with territorial, economic and social boundaries.

[47] *Second Chair*

**Desentis, Cristina** [20] *see Urunuela, Gabriela*

**Deskaj, Sylvia (Northeastern Illinois) and Anna Cohen (University of Chicago)**

[74] *The Shala Valley Project, Northern Albania: Results of the 2008 Field Season*

The Shala Valley Project employs an interdisciplinary approach to the history of landscape and land use in the Shala River Valley of northern Albania. This paper will discuss the results obtained from mapping and excavation at the site of Grunas in 2008. New data reveal that the terraces and fortifications at the site were planned and built in a single construction phase in the Early Iron Age (c. 800 BC). Additionally, a packed clay surface, possibly a floor, uncovered in Unit 3 indicates that the terraces at Grunas were densely occupied in the Late Iron Age (c. 400 BC).

**DeTore, Kathryn E.** [97] *see Weaver, Brendan J. M.*

**DeWeese, Georgina** [142] *see Foster, Thomas*

**di Lernia, Savino (Sapienza University, Rome)**

[16] *Settlements system and intrasite organisation of Saharan Neolithic pastoralists: a perspective from the Acacus Mts. (SW Libya)*

Recent research in the Acacus Mts. (SW Libya, central Sahara) yielded new information on Early and Middle Holocene pastoral societies (ca. 7000-4000 uncal years bp). Fieldwork has been strategically organized at two different levels: extensive surveys in diverse geomorphological units and selected excavations in both open air sites and rockshelters/caves. The combination of the two field strategies reveals to be rather satisfying, providing interesting insights on social organization of Neolithic Pastoral societies. Issues such as changes in mobility, emergence of transhumance and reorganization of food security have been eventually tested against data coming from mortuary contexts.

**Diaz Pais, Elena** [139] *see Kligmann, Debora M.*

**Diaz, Tracie (Statistical Research, Inc.)**

[43] *Where Have All the Children Gone? Epidemic Disease and Child Burial in the American Southwest*

It is not uncommon for a cemetery population, of any era, to consist of nearly one half children. Within Tucson's National Cemetery, however, one area consists almost entirely of children. Disease epidemics, such as smallpox outbreaks, swept through the city during the time the cemetery was in use, claiming the lives of many children in Tucson. In this paper, I use historical, palynological, skeletal, and dental information to evaluate whether concentrations of child burials at the site could represent the catastrophic effects of epidemic disease.

**Diaz-del-Rio, Pedro (Instituto de Historia, CSIC), Alfonso Fraguas (Instituto de Historia, CSIC), Antonio Menchero (Instituto de Historia, CSIC), Juan M. Vicent (Instituto de Historia, CSIC) and Susana Consuegra (Instituto de Historia, CSIC)**

[91] *Sharing Knowledge Through the Spatial Data Infrastructure: The Casa Montero Flint Mine SDI as a Prototype*

The challenging aim of a universal inventory of prehistoric mines would nowadays require of advanced cutting edge information technologies. These should have worldwide availability. Its information would have to resort to basic principles of interoperability, and follow freely shared, decentralized, and cooperative standards which can take us beyond static web-based databases. All these conditions could be fulfilled through Spatial Data Infrastructure technologies. We exemplify its potential through the ongoing construction of the Casa Montero Early Neolithic Flint Mine SDI. The fact that the archaeological record can be understood as geographical data is quintessential.

**Diaz-Granados, Carol (Washington University-St.Louis) [109] Discussant; [84] Second Chair**

**Dibble, Harold [184] see Smith, Jennifer R.**

**Dibble, Loretta (Rutgers University) and J.W.K. Harris (Rutgers University)**

[3] *Like a fish out of water: where does fishing subsistence fit in the hunter-gatherer/pastoralism continuum in North and East Africa?*

Like a fish out of water: where does fishing subsistence fit in the hunter-gatherer/pastoralism continuum in North and East Africa? Evidence for exploitation of fish during the mid-Holocene is seen across a wide geographic and temporal expanse of Saharan and sub-Saharan Africa but the economics and theoretical implications of fishing have received scant attention. This paper presents an overview of the evidence for fishing in a regional context, and highlights comparative information about fishing localities in the Sahara, Sudan, and East Africa. Recent work on technology and economy of fishing and fish processing in East Africa is considered in the context of current theoretical understanding of hunter-gathers and pastoralists.

**Dick, Hadyn (UCLA International Education Office)**

[162] *Managing Field Programs Across The Globe: The Administrative View*

What makes a successful archaeology field program from a student's perspective? What should faculty consider when creating a field school? This presentation will focus on a range of field school planning issues to consider, such as the importance of engaging students not just academically but culturally, preparing students for a true hands-on experience, being attentive to special needs such as student illness or culture shock, and assessing sites for safety. The presentation will discuss the attributes a field school director should possess and how to be prepared for the unexpected. Some case studies will be included.

**Dickerson, Tom [13] see Blinman, Eric**

**Diehl, Richard [148] Discussant**

**Diener, David (New South Associates) and Greg Smith (New South Associates)**

[90] *Cultural Resources Overview and Survey Strategy: Comprehensive Everglades Restoration Plan*

As part of the Comprehensive Everglades Restoration Plan (CERP), the U.S. Army Corps of Engineers asked New South Associates to prepare an updated archaeological survey strategy to more effectively identify probability areas and locate sites. The CERP study area covers most of southern Florida and comprises some or all of thirteen counties. As a supplement to the survey strategy, GIS Data Sets were created that illustrate site location patterns within eight CERP subregions. These introduce a basic toolkit of variables to consider when using GIS capabilities to identify site probability areas.

**Dillian, Carolyn (Princeton University), David Braun (University of Cape Town) and Emmanuel Ndiema (Rutgers University)**

[168] *Obsidian Characterization and Theories of Interaction, Koobi Fora, Kenya*

Characterizing obsidian sources from northern Kenya is an ongoing project, with an ultimate goal of using these data to understand the movement of peoples during the transition to pastoralism. As few of the geologic obsidian sources in this region have been located or definitively characterized, much of this research is moving forward through the X-ray fluorescence analysis of archaeological specimens. Specifically, we can compare assemblages through time and across space to understand how changes in the use of obsidian reflect changes in subsistence strategies. Furthermore, this information may help us understand the manner by which these changes occurred.

**Dionne, Charles [99]** *see Wardlaw, Dennis K.*

**Dobereiner, Jeffrey (Brandeis University), Robert H. Tykot (University of South Florida) and William Saturno (Boston University)**

[168] *Source Analysis of Obsidian from San Bartolo and Xultun, Guatemala by X-ray Fluorescence*

This paper presents the results of the first obsidian sourcing study to be performed on material from San Bartolo and Xultun, Guatemala, dating from the Middle Preclassic to the Late Classic Period. Sixty obsidian blades from these Maya sites of San Bartolo and Xultun were analyzed non-destructively by visual characteristics, density and X-Ray fluorescence (XRF) to determine trace element composition. These values were compared with known sources in Mesoamerica to perform geological source determinations. This dataset serves as an important component in studies of trade interactions for these two sites in the Maya area.

**Dodd, Lynn (USC) [162]** *Discussant*

**Dodd, Walter (CSU-Fresno)**

[189] *Influence of Maize Preparation Technique on Groundstone Tool Size*

Prior research has shown that degree of agricultural dependence is positively correlated with ground stone tool dimensions, especially in the processing of grains like maize. Evidence is presented here for yet another variable that may be linked to ground stone tool enlargement--how maize is differentially prepared for consumption. Time-motion data collected from an ethnoarchaeological setting in northwest Mexico are used to contrast the labor requirements of making tortillas (corn dough) versus making pinole (corn meal). These data have significant implications for interpreting ground stone variability in the archaeological record.

**Dodge, Robyn (UT Austin) and Fred Valdez, Jr. (The University of Texas at Austin)**

[133] *Preliminary Analysis of the 2008 Investigations at the Maya Settlement of RB 0 in Northwestern Belize*

Investigations of a recently identified group at the Maya site of "RB 0," in northwestern Belize, provided data concerning settlement and construction chronology. Preliminary investigations during the 2008 field season focused on survey and mapping, while initial excavations focused on establishing chronologies for the courtyard spaces. Significant finds include two possible stelae and a possible altar. Excavation units were limited to the courtyard spaces and produced a variety of material culture. Among the recovered artifacts were obsidian blades, sea shells, eccentrics, and a single piece of greenstone. Other, more common, artifacts included ceramics and lithics, critical to constructing the chronology.

[133] *First Chair*

**Doering, Travis (USF - AIST), Lori Collins (University of South Florida) and Mary Pohl (Florida State University)**

[99] *Three-Dimensional Laser Scanning of Olmec Stone Monuments from La Venta*

Documenting carvings on stone monuments through a variety of conventional techniques has been a long-standing methodological approach to epigraphic and iconographic research in Mesoamerica. Now, new laser scanning technologies allow for rapid, ultra-high-resolution examination of carvings and are exceptionally useful for analysis of eroded and highly irregular surfaces. The Middle Formative period (c. 900-400 BCE) Southern Gulf Coast Olmec site of La Venta in Tabasco, Mexico, offers a corpus of complex stone monuments including altars and stelae. Examples of monumental sculpture from this site demonstrate the capabilities and power of laser scanning to significantly advance research and analysis.



**Doering, Travis [183]** *see* Mcleod, Bart; [126] *see* Collins, Lori D.; [163] *see* McCoy, Elizabeth C.; [174] *see* Penders, Thomas E.

**Dolan, Patrick (Washington State University), Colin Grier (Washington State University), Kelly Derr (Washington State University), Melissa Goodman-Elgar (Washington State University)**

[175] *Tracking Dirt: Bringing Geoarchaeology into the House*

Anthropogenic sediments form a rich repository of information in the archaeological record of the Northwest Coast that has yet to be fully explored. Household archaeology could benefit from a more thorough understanding of the deposit as source of information regarding spatio-temporal patterns of human behaviour. This study focuses on the formation and morphology of house deposits recovered from the Marpole village at Dionisio Point, BC. Spatial contexts are reflected in the soil physical and chemical properties. Exploring these trends allows evaluation of the application of models of Salish shed-roof style houses and archaeological interpretations of long-term household history.

[175] *Third Organizer*

**Dolan, Patrick [85]** *see* Grier, Colin; [175] *see* Derr, Kelly M.

**Dominguez Carrasci, Maria del Rosario [133]** *see* Folan, William J.

**Donner, Natalia (UNAM), Jonathan Hernández Arana and Paulina Arellanos Soto**

[92] *El Carrizal: a Pre-Classic site in South-Central Veracruz?*

El Carrizal, Veracruz, is a site in South-Central Veracruz which was excavated by archaeologist Bertha Cuevas in the sixties. Multiple burials, yokes and Late Pre-Classic ceramics were found. Since those early years, no other studies have been undertaken in the area. The El Carrizal Archaeological Project 2009 Season sought a settlement pattern study, as well as a preliminary re-definition of the site's chronology. Results related to this last issue will be presented on this paper, to encourage discussion and comparisons.

[92] *First Chair*

**Donner, Natalia [92]** *see* Arana, Jonathan H.

**Doran, Glen (Florida State University) [125]** *Discussant*

**Dore, Chris [88]** *see* Herr, Sarah A.

**Dost, Sarah (Mercyhurst College) and Vanessa Sullivan (Mercyhurst College)**

[30] *Impressed Ceramics from Scarem-Kramer: Description and Distribution of Final Twist on a Monongahela Village Site.*

Scarem-Kramer (32Wh22), in Washington County, Pennsylvania, is a late prehistoric Monongahela village site exposing half of a large midden ring surrounded by a myriad of artifacts including faunal material, lithic material, and both perishable impressed ceramics and non-impressed ceramics. The focus of this study is the final twist analysis of the impressed ceramic materials which demonstrate both S and Z final twist cordage and the analysis of possible plaited and twined specimens. This paper furthers the understanding of the artifact distributions at Scarem-Kramer by demonstrating the placement of the impressed ceramics across the site.

[30] *First Chair*

**Dotterweich, Markus [98]** *see* May, Jared David

**Doucette, Dianna (Public Archaeology Lab)**

[116] *The Complexity of Archaic-ness: Connecting the Culture to the Landscape*

The term "Archaic" has taken on a life of its own in popular culture, apart from what archaeologists strive to define as a cultural identity and sequence of events. In the northeast, where the archaeological record is dictated by preservation, evidence of highly advanced knowledge of the landscape, environment, and creative ingenuity left by the native inhabitants is often overlooked. This paper explores the important aspects of defining settlement and mortuary complexity during the Archaic Period using the Annasnappet Pond Complex in southeastern Massachusetts as a way to look beyond the already established projectile point typologies and feature designations.

[153] *see* Flynn, Erin

**Douglass, John (Statistical Research, Inc.) and Seetha Reddy (Statistical Research, Inc.)**

[178] *Late Holocene Culture Contact: A Comparative View*

Prehistorians working in California have often relied upon a rich ethnographic record - thick with information on ideology, social organization, and subsistence activities - to enhance their interpretations of the past. These ethnographic descriptions of varied Native American tribes are typically static and normative in character, rarely exploring how these cultures adapted to unprecedented upheavals. This paper explores coastal California Native American culture change in the Late Holocene through the initial Spanish occupation. Focusing on culture contact and adoption of non-local traditions and lifeways, we explore how indigenous cultures, both in California and elsewhere, adapted to maintain their identity.

[178] *First Chair*

**Douglass, Matthew (University of Auckland) and Simon Holdaway (University of Auckland)**

[127] *Exploring Artifact Curation amongst Expedient Stone Artifacts within Australia's Arid Core*

Researchers have remarked on the expedience of Australian lithic technology, suggesting artifacts were manufactured when needed and quickly discarded. Investigations of over 150,000 artifacts, however, indicate that cortical surface area is extensively underrepresented from locally knapped assemblages, suggesting cortical blanks were removed for use elsewhere. This finding recasts Aboriginal stone technology as a highly organized strategy for ensuring the availability of flaked stone whenever and wherever it was needed. This contradiction raises not only the question of how curation and expedience are differentiated archaeologically, but also the larger issue of how these designations inform on the organization of past life-ways.

**Douglass, Matthew [145] see Lin, Sam CH**

**Doumani, Paula (Washington University), James Stoltman (University of Wisconsin-Madison) and Michael D. Frachetti (Washington University in St Louis)**

[63] *Mobility, Interaction and Identity Formation in Late Bronze Age Kazakhstan*

Previous approaches to the archaeology of Late Bronze Age Eurasia have applied normative conceptions of migrations of large culture blocks to explain a broadly continuous record of material culture. As our understanding of mobility practices increase, questions as to the delineation of social groups and their interactions come to the fore. Recent archaeological research in Semirechye, Kazakhstan, has begun to highlight the local variability of pastoral populations. In an attempt to build on recent studies this paper looks at social interaction through provenience analysis of ceramics and seeks to contribute to a better understanding of interactions between pastoral groups.

**Downey, Jordan (University of Western Ontario)**

[71] *Catequil's Lithics: Stone Tools from an Andean Complex Society*

Lithic artifacts are often largely or wholly ignored by archaeologists studying complex societies. While this situation is being rectified in many parts of the world, the Andean mountains of northern Peru remain one area where very few lithic analyses have been conducted. To this end, a comprehensive analysis was conducted of all lithic artifacts from four sites associated with the Oracle of Catequil, located on and around the mountain of Cerro Icchal near the village of San José de Porcón in La Libertad, Peru. The oracle, in use between 400 CE and the Spanish arrival in 1532 CE, is a sacred site of ancestor veneration and a place of pilgrimage. Through this analysis, I am able to show the relationships between the four different sites at Cerro Icchal, as well as show how this expedient tool assemblage fits into a general model for lithic design criteria in complex societies.

**Doyel, David (US Air Force, Luke AFB, Arizona) and Adrienne Rankin (USAF, Luke Air Force Base)**

[10] *Reservoirs as Public Architecture: Examples from the Western Papagueria, Arizona*

Earthen reservoirs were important features of economic organization in the Sonoran Desert. The addition of this technology provided a foundation for the expansion of permanent or near-permanent villages into new areas and intensified the occupation of existing areas removed from perennial water sources. Excavation and maintenance of reservoirs required organized labor and scheduling that required organization and community participation. Reservoirs can be considered a form of public architecture, especially in areas peripheral to the Hohokam core, such as the Western Papagueria, that lacked other forms of public architecture. Examples are reported and their roles in regional organization are discussed.

**Drake, Lee (University of New Mexico)**

[127] *The effects of pig husbandry in the Pacific on long-term reproductive fitness*

High resource investment in livestock provides a valuable window into the long-term consequences of pig husbandry. An individual selectionist approach reveals how the high nutrient needs of pigs can act as a buffer against the carrying capacity when land is limited, and results in increased reproductive fitness for its practitioners. Agricultural practices of Futunans and New Zealanders are analyzed with regard to metrics of land production and resource allocation in this context. The relationship between these islanders and their domesticated pigs in closed agricultural systems sheds light into the high-costs and high-benefits of long term planning.

[49] see Nazaroff, Adam J.

**Dresch, Paul**

[113] *Material Boundaries: territory and its traces in Arabia*

Cultural anthropologists speak easily of 'social space' and rarely think what they mean. Archaeologists, with typically a more restricted range of evidence, must think more carefully. In the absence of epigraphic or documentary evidence political territory can be hard to spot. The borders of Arabian tribes or Imamates are in one sense quite insubstantial. The present paper tries to turn the archaeologist's problem back on the anthropologists and historians. Where does the materiality of, say, tribal divisions lie and how should we understand it? If 'social space' includes political territoriality, what counts as proof of its existence?

**Drew, Natalie**

[37] *Associated Records: The Cost of Curation*

The cost of curating associated documentation can be prohibitive if not planned for appropriately. Much has been said about the practices and costs of curating archaeological material remains, but little information is available on similar strategies for reducing the costs of curating the records accompanying these collections. The paper will discuss the costs of curating associated records as well as provide suggestions on how to reduce these costs. Comparative costs of physical versus digital records will also be addressed.

**Driese, Steve [53]** see Messner, Timothy Charles

**Drolet, Elizabeth (American Museum of Natural History)**

[18] *Examining Artifacts with a Conservator's Eye: Analysis of Carved Shell Effigies*

Conservation and archaeology can offer mutually beneficial means of gathering information about artifacts. The examination of several prehistoric carved shell frog effigies from New Mexico highlights some analytical methods and strategies conservators use to examine artifacts, and demonstrates that conservators can often identify and preserve data from archaeological material that might otherwise be overlooked. These objects were examined using a variety of methods including polarized light microscopy, ultraviolet fluorescence, and microchemical testing. This poster summarizes the background and treatment of these objects and addresses the benefits and ethical considerations of a conservation-guided approach to artifact analysis and preservation.

[46] see Napolitano, Matthew F.

**Drumheller, Douglas [145]** see Boyd, Charles C.

**DuBarton, Anne (NewFields International) and Lauren Perry (U.S. Bureau of Reclamation)**

[88] *The Mountains to the Valley: Utilization of Environmental Zones In and Around the Las Vegas Valley*

The narrow focus of compliance driven cultural resources investigations along the eastern edge of the Las Vegas Valley, Nevada, has compounded narrow interpretations of prehistoric activities. Recent investigations of sites in the River Mountains uncovered a series of sites spanning the Archaic to the Late Prehistoric. All stages of tool production, including procurement, thermal treatment, reduction and use, were found at surface sites and small rockshelters. Combining this information with previous research provides data to test forager-collector models and theories regarding ethnic group interactions and movement to and from the Colorado River.

**Dublin, Susan (Hunter College)**

[126] *The Social Logic of Sacred Space: Medieval monasticism and urban planning*

The medieval monastery served two masters. Monasteries played an important role in secular power structures and as feudal landlords, hostelrys, and repositories for accumulated knowledge, while their role as intermediaries between secular and supernatural rested on secrecy and the control of arcane knowledge and ritual. The monastic spatial configuration expressed this

functional duality by simultaneously facilitating and restricting social encounters into and within the complex. This proposition is evaluated through application of the principles of space syntax to the ninth century plan of the monastery of Saint Gall (Switzerland), conceived and designed as a template for the ideal Benedictine monastery.

**DuChemin, Geoffrey (University of Florida)**

[172] *Increased Recovery: Zooarchaeological Survey Strategies in South-Central Puerto Rico*  
During the Tibes Archaeological Survey Project in May and June of 2008, an excavation strategy was applied in order to increase usable archaeological data while minimally impacting sites. Strategically placed and carefully excavated column samples were taken and water-screened using fine mesh (1/16") screen. The strategy was initially developed to recover faunal material for a zooarchaeological study of the region. However, the archaeological material recovered from these column samples when integrated with material from standard shovel tests, not only provide ample zooarchaeological data, but also augment the overall understanding of newly discovered sites.

**Duff, Andrew (Washington State University) and Caitlin A. Wichlacz (Washington State University)**

[18] *The Spatial and Temporal Dynamics of Chacoan Communities on the Southern Frontier*  
Full-coverage survey surrounding two great houses in west-central New Mexico provides data used to reconstruct the spatial extent of Chaco-era communities. Excavated assemblages and tree-ring dates at the great houses of Cox Ranch Pueblo and Cerro Pomo provide a temporal anchor. Testing of community sites and surface collection of others provide comparable ceramic data used to temporally order settlements via multivariate seriation. Temporal, locational, and site size data are then used to assess the demographic scale and geographic extent of these communities, which suggests sizable social entities were newly established within the region in the mid-A.D. 1000s.

**Duff, Andrew I. [18] see Clark, Lindsey R.; [18] see Krum, Cassandra E.; [183] see Bowser, Brenda J.**

**Duffy, Paul (University of Michigan)**

[74] *Kis and "Tell": considering regional political hierarchy for the Bronze Age Körös*  
This paper explores food production and social relationships between tell and off-tell sites in the Körös area of southeastern Hungary during the Early and Middle Bronze Age. Micro-environmental information is combined with food productive estimates of pre-industrialized farming techniques to reconstruct land use potential. These figures are compared with population estimates at the tells, evaluating whether the food productive capacity in the immediate environment was sufficient or required imported food (as tribute). Recent data from the excavations of Tarhos Gyepesi Átkelő, an off-tell site downriver of the Békés-Várdomb tell, are briefly discussed in light of the results.

**Duke, Daron (Far Western)**

[179] *Stone Tools as Indicators of Optimal Foraging Strategies for Great Basin Paleoindians*  
Paleoindian subsistence in the Great Basin remains unclear owing to a lack of dietary information. Extensive surface sites on pluvial lake shorelines and drainage systems indicate that these areas were important but little else has been determined. Optimal foraging models based on ethnographically documented behavior suggest that central place foragers would reside near immediately available marsh resources while logistically obtaining large game from adjacent uplands. Paleoindian stone tools from the Great Salt Lake Desert are found in the most remote basin area in the West and provide a unique opportunity to examine functional priorities in a distinct wetland setting.

**Dunbar, James (FI Bureau of Archaeology)**

[125] *The Wakulla Springs Lodge Site (8wa329): A Pre-Clovis Paleoindian Habitation Or Temporal Tempest? Well How About Both!*  
Two sites in the Aucilla River basin in North Florida have yielded radiocarbon ages on artifact levels ~1,400 years older than Clovis. Two other sites in North Florida have produced non-Clovis projectile points similar to those at the pre-Clovis Aucilla sites. Investigation of the Wakulla Springs Lodge site was recently undertaken to determine if it also might represent a pre-Clovis contender. The archaeological results of this study will be discussed in light of a temporal context that suggests a Pleniglacial to early glacial recession, Bølling timeframe. In other words, it is clearly older than Clovis.

**Duncan, James**

[109] *First Woman's Journey through Time: Comparing Images in Rock Art and Artifacts*

This paper looks at a set of motifs associated with an important supernatural character, "Old Woman" or "First Woman." These vulvar motifs that are present at a substantial number of Missouri rock art sites represent a character being in the iconography of the Mississippi Valley. There appears to be a shift in this important lexical symbolism. A possible interpretation for these motifs and artifacts will be discussed.

**Duncan, Neil (University of Missouri-Columbia)**

[151] *Appraising Evidence of Feasting at a Late Archaic Temple on the Central Coast of Peru*

This paper will address the question "what might feasting 'look like' at an aceramic Peruvian site?" and evaluate evidence of feasting through paleoethnobotanical investigation at the Late Archaic (Pre-ceramic) site of Buena Vista in the Chillón Valley on Peru's central coast. This inland site on the valley floor revealed Kotosh-like architectural features and an associated large unique stratified deposit of botanical remains, including cultivated and domesticated plants. Food remains were identified through multiple techniques, including macroremain analysis, phytoliths and starch. The use of multiple paleoethnobotanical techniques provides a unique opportunity to examine the role of food in early ritual expression.

**Dungan, Katherine (University of Arizona) and Deanna Grimstead (University of Arizona)**

[164] *Shell Procurement Behavior in the Prehistoric Southwest: Geochemical and GIS Methods*

Preliminary carbon and oxygen isotope data provide a framework for sourcing marine shell both to the Pacific Ocean or Gulf of California and within the Gulf of California. We used this framework to source shell artifacts from a 13th- 14th century occupation above the Mogollon Rim in east-central Arizona and have incorporated these results into a GIS-based cost-path model of shell transport from source areas within the Pacific or Gulf of California to the Mogollon Rim region. Here we examine this model in the context of current discussions of shell trade and procurement in the prehistoric Southwest.

**Dunivent, Meggie (Univ. of West Georgia), Susan E. Fishman-Armstrong, M.A. (University of West Georgia) and Thomas Foster (University of West Georgia)**

[135] *How to Create an Education Outreach Program with Minimal Funding and Time*

The Antonio J. Waring, Jr. Archaeological Laboratory at the University of West Georgia has increased its exposure to students and educators by over 230%, since its implementation of a formalized Education Outreach Program in 2003. The program components were designed to educate students in the third through eighth and at the collegiate level. The Waring Laboratory has developed a program geared toward assisting the educator with teaching basic archaeology and preservation of cultural heritage using standardized skills including math, reading and science. This paper examines how to set up and maintain a successful education program with minimal funding and time.

[135] *First Chair*

**Dunning, Nicholas (University of Cincinnati), John Jones (Washington State University), McCormick Carmen (University of Cincinnati) and Timothy Beach (Georgetown University)**

[83] *Drought and the Preclassic-Classical transition in NE Peten and NW Belize*

The Late Preclassic was a time of great environmental change in many parts of the Maya Lowlands including the Classic Maya 'heartland' in the NE Peten and NW Belize. What is less clear is the degree to which this change was the result of anthropogenic or natural processes. We synthesize data collected in regional bajos and aguadas and other wetlands, together with data derived from lacustrine studies, and settlement histories. These data suggest that anthropogenic change in the form of forest clearance and soil erosion or climatic volatility were more likely the larger agents of environmental change during this time, but drought or cyclical drying may well have been a critical factor influencing the ability of different Maya communities to adapt to changing conditions towards the end of the Preclassic.

**Dunning, Nicholas** [99] *see Casile, Claudette A.*; [185] *see Smyth, Michael P.*

**Dunivent, Meggie** [53] *see Taylor, Marybeth*

**Durand, Stephen R.** [66] *see Roler Durand, Kathy*

**Durham, Barbara (Timbisha Shoshone Tribe)** [105] *Discussant*

**Dussault, Frederic [146]** *see Dussault, Frédéric*

**Dussault, Frédéric (Université Laval) and Allison Bain (Université Laval)**

[146] *Archaeoentomology at the Top of the World: the Inglefield Land Archaeological Project 2008*

Insects and flies have a remarkable capacity for colonizing new environments, and often represent specific ecological niches. They are therefore valuable proxy indicators of past climates and environments. While there have been several palaeoentomological studies on northern Greenland, none have explored the human occupation of this region, using archaeoentomology. Sediment samples analyzed from structures along with comparative off-site samples and modern insect collecting data examine both present and past climatic and environmental conditions, as well as the daily life of the region's occupants. The 2008 excavations included sampling Thule, Dorset and Independence 1 cultures, providing a chronological sequence spanning 4000 years.

**Dussubieux, Laure [174]** *see Williams, Patrick Ryan*

**Duwe, Sam (University of Arizona)**

[18] *Ancestral Tewa Duality: A Comparison of Two Sites in the Rio Ojo Caliente Valley, New Mexico*

The historic and modern Tewa pueblos of northern New Mexico provide one of the clearest examples of dual division (moiety) systems in the anthropological literature. Identifying this socio-religious structure archaeologically has proven more difficult. This poster explores Tewa dual division by comparing the architecture and ritual landscape of two neighboring and contemporaneous Classic Period (AD 1325-1600) villages, Hupobi-ouingue (LA 380) and Howiri-ouingue (LA 71), located on the northernmost boundary of the Tewa world. The study of duality among paired villages addresses questions pertaining to the evolution of Tewa identity and cosmology.

**Dyer, Jennifer (University of New Mexico)**

[13] *Glaze-paint colono wares: representing continuity or innovation?*

This study examines the nature of technological changes in Pueblo glaze-paint ceramics, particularly colono wares, in the Rio Grande region after Spanish contact. Colono wares are hybrid ceramics with attributes from Native ceramic traditions and medieval European vessel forms. Little is known about technological changes that may have accompanied these new vessel forms. I examine colono wares as a separate artifact class and compare them to traditional forms that continue to be produced following Spanish settlement. The most significant question is whether the technology of colono wares is as different as the vessel forms themselves, constituting a new ceramic tradition.

**Dyrdahl, Eric (Penn State), Douglas Smit (Far Western) and Hannah Sistrunk (Far Western)**

[191] *Inka Warfare: A GIS-Based View from the Pambamarca Fortress Complex*

Much of our knowledge of Inka territorial warfare comes from ethnohistoric documents. While it is primarily limited to the frontier zones of the empire, archaeological evidence does exist that can be compared to these documents to advance our understanding of Inka warfare. In this paper, we use GIS, site survey data, and pertinent ethnohistoric details to compare the traditional model of Inka warfare to a single case study: the Inka-Caranqui conflict. We focus our attention on the area surrounding the Inka-built Pambamarca fortress complex, which highlights the importance and flexibility of territorial warfare in Inka society.

**Dziedzic, Erica (Michigan State University)**

[71] *That Pot Has a Pretty Picture: Preliminary Research on Chiribaya Ceramic Iconography*

A considerable amount of research has been conducted exploring the cultural patterns of the Chiribaya, a Late Intermediate Period material culture located on the southern coast of Peru. However, few questions have been asked that incorporate the iconography of ceramic vessels associated with this group. This paper presents preliminary research using iconographic data on pottery from mortuary contexts from the cemetery of Chiribaya Alta. I will discuss the distribution of Chiribaya ceramic iconography on the Osmore coast, allowing a new look at socio-economic, social, interactive, and design patterns.

**Dzubak, Alexis [53]** *see Pedler, David*

**Eagleman, Jonathan [88]** *see O'Boyle, Robert C.*

**Earley, Caitlin (University of Texas at Austin)**

[36] *Culture at the Crossroads: Style and Identity in the Art of Chiapa de Corzo*

The Late Preclassic monumental art of Chiapa de Corzo displays clear affinities with art from the Pacific and Gulf Coasts. These iconographic and stylistic similarities provide an opportunity to examine the construction of identity through monumental art at Chiapa de Corzo. A close iconographic analysis, for example, suggests that site rulers incorporated foreign motifs to emphasize the cosmopolitan nature of their city. But the monuments also combine visual elements in unique ways, creating a site-specific style. This study will analyze the sculptural corpus of Chiapa de Corzo to explore how art was used to construct a specific cultural identity.

**Eaton, Ethel [160]** *Discussant*

**Eckert, Suzanne (Texas A&M University)**

[13] *Choosing Clays and Painting Pots in the Late Prehispanic Zuni Region*

Pottery design, clay chemical characterization, settlement patterns, and linguistic studies have been used to understand Zuni origins and subsequent cultural developments. Ultimately, our understanding of what it means to have become Zuni within the larger social landscape requires, at least in part, an understanding of ZUNI glaze paint technology. On the one hand, glaze technology was adopted throughout much of the prehispanic Pueblo world; on the other hand, residents of the Zuni region developed unique glaze ware and matte paint ware traditions. I situate recent research on Zuni pottery production within broader historical processes of cultural change and continuity.

[147] *see James, William D.*

**Eddy, Mike (Deal Maritime Museum, Kent, England)**

[67] *The Darkness of the Other World: Berber Belief Systems and the Cave Burials of the Canary Islands*

The pre-Islamic Berber world view, which interprets spatial relationships as a series of binary oppositions (right/left; high/low; light/dark etc.), has been employed elsewhere (Eddy 1997) to understand the layout of pre-Spanish (Guanche Culture) dwelling caves on the Canary Islands. The purpose of this paper is to use that belief system to explain aspects of the pre-Spanish hierarchy of burial rites associated with caves. The paper will consider the special significance of mummification, hide and basketry shrouds, and upright burials within the burial hierarchy.

**Edging, Richard [131]** *see Zeidler, James A.*

**Edwards, Joshua [27]** *see Anderson, Kirk*

**Eerkens, Jelmer (University of California, Davis) and Amy Spurling (University of Utah)**

[161] *Diachronic Patterns in Cooperation in Owens Valley, Southeastern California*

From a household perspective, we examine artifact redundancy and access to non-local goods over time. Marked changes in how households accessed and used various goods are evident, from a homogenous and redundant record to a much more heterogeneous pattern between households. We interpret these patterns from the perspective of cooperation and interaction between economic units.

**Egger, Andrea [29]** *see Amick, Daniel S.*

**Ehrhardt, Kathleen [53]** *see Belknap, Lori*

**Elera, Carlos [170]** *see Shimada, Izumi*

**Elera Arevalo, Carlos (National Sican Museum)**

[170] *The Sican National Museum and Its Place in Andean Archaeology*

The National Sican Museum is one of the very few museums in Peru that are based on collections and information derived from archaeological research. It promotes multidisciplinary, holistic studies of Sican cultural remains, especially in the Poma Forest Historical Sanctuary. Apart from permanent and traveling exhibits, it also aims to play a key role in the establishment, protection, and promotion of the regional cultural patrimony, sustainable tourism, and biodiversity. Through various examples, this paper illustrates how the museum achieves these aims and strives to be an institutional model of archaeological research and diffusion of its results to both the public and professionals.

**Elia, Ricardo (Boston University) [159] *Discussant***

**Ellick, Carol (University of Oklahoma) [57] *Discussant***

**Elliott, Gabrielle [41] *see Gardner, A. Dudley***

**Elliott, Rita (Coastal Heritage Society) and Laura Seifert (Coastal Heritage Society)**

[135] *ArchaeoFest: An Archaeology Festival Case Study*

Completely out of ideas for an Archaeology Month event? In search of some hands-on activities for students or the public? How do you address the requests for a digging component in a public archaeology event? What works and doesn't work when advertising, marketing, and inviting the public to participate? Discover our remedies and the ongoing challenges of Coastal Heritage Society's annual archaeology festival, "ArchaeoFest" in Savannah, Georgia.

**Ellison, Leigh Anne (Arizona State University)**

[27] *Hilltop Homes: A Preliminary Evaluation of Household Density at Cerro Jazmín, Mixteca Alta, Oaxaca*

Preliminary investigations at the terraced hilltop site of Cerro Jazmín have revealed prehispanic occupations spanning the Terminal Formative/Early Ramos through the Late Postclassic/Natividad (300 BC–AD 1521) periods. Evidence for continuous prehistoric habitation is punctuated by the absence of material dating to the Late Ramos (150 BC–AD 150) and Late Las Flores (AD 800–1000) periods. Using recently collected survey data, this paper chronicles the temporal rise and fall of occupation at Cerro Jazmín in the context of household density and distributional patterns observed at other primary Oaxacan hilltop sites (El Palmillo, Jalieza, and Monte Albán).

**Elquist, Ora (PAL, Inc.)**

[9] *Big Creek 2: Investigations of a Multicomponent Campsite in the Ridge and Valley Province, South-Central Pennsylvania*

The Big Creek 2 Site is a multicomponent campsite located in Bedford County within the Ridge and Valley Province of south-central Pennsylvania. Investigations revealed that the site consists of numerous overlapping deposits representing short-term campsite occupations spanning 9,000 to 10,000 years. The site assemblage is likely the result of focused deposition related to a gap in the ridge system at this location. Multicomponent sites in upland, headwater environments such as Big Creek 2 are relatively rare in Bedford County. The site has the potential to contribute new information on pre-contact settlement and land use of the area.

**Eltsov, Piotr**

[39] *The idea of ancient India: A closer look at the Harappan culture from the point of view of ancient Indian thought*

This paper summarizes the results of my research dealing with the identity of Harappan culture. I argue that ancient Indian thought provides far better characterization of Harappan society than the concept of the early state. Based on the analysis of Sanskrit texts and archaeological data, I suggest that the Great Tradition of ancient South Asia can be described by focusing on the relations between religious and secular authorities, the mechanisms of transmitting information, the ethical foundations of political practice, the nature of territorial expansion, and ritual practices. Avoiding any explicit ethnolinguistic correlations I point to the continuities of sociopolitical, ritual, and ethical nature.

**Emerson, Thomas (University of Illinois), Kenneth Farnsworth (University of Illinois), Randall Hughes (Illinois State Geological Survey) and Sarah Wisseman (University of Illinois)**

[91] *Identifying and Differentiating Midcontinental North American Pipestone Quarries*

Most midcontinental U.S. pipestones are argillites or claystones that form as paleosols and were then transformed by low-temperature metamorphism. These paleosols often have similar major-, minor-, and trace-element compositions but conditions during metamorphism generate unique mineral suites. Limestones, limestone-cemented limestones, and a lesser number of chlorites make up the vast majority of pipestone materials. Our ongoing work with a portable infrared mineral analyzer (PIMA) and more recently with a L\*a\*b\* color meter has demonstrated that these individual deposits can generally be differentiated. Such mineralogical identification is an important first step in identifying and inventorying the midcontinental pipestone quarries available to native peoples.



**Emery, Kitty (FL Museum of Natural History) and Erin K. Thornton (University of Florida)**

[83] *Effects of Precipitation Variation on Wetland Habitat Use as Reflected by Animal Remains from Maya Archaeological Sites*

Animal remains recovered from archaeological deposits represent proxy evidence for their preferred habitats and therefore the environments from which they were originally gathered. In this study we examine the changing proportions of remains of animals from freshwater-based habitats (including rivers, lakes, perennial and seasonal swamps) to trace the impact of drought on the ancient Maya landscape. Our results present a broad regional and chronological perspective, using chronologically defined samples from sites across the ancient Maya world. Archaeological animal remains provide a valuable data-source because they are directly linked to the cultural record of human activities.

**Emery, Kitty F. [83]** see *Repussard, Antoine*

**Emslie, Steve [190]** see *Meltzer, David J.*

**Endacott, Neal (Washington State U.) and Robert E. Ackerman (Washington State University)**

[145] *Small and Medium-Sized Mammals as Diversity Indicators from Lime Hills Cave, Southwest Alaska*

Studies of faunal remains from the small number of excavated caves and rockshelters in eastern Beringia have focused on questions of large mammal taphonomy and the timing of human entry into North America. Paleoenvironmental inferences from their abundant small mammal remains are an under-utilized source of information. Diversity measures derived from small and medium-sized mammals recovered from Lime Hills Cave, southwest Alaska, provide insight into past animal communities of eastern Beringia over the last 38,000 years. Of particular significance are the high diversity measures occurring during the site's early Holocene Denali complex occupation.

**Englehardt, Joshua (Florida State University)**

[187] *Processual Metaphors and Agentive Realities: Structures, Agents, and Conjunctions in Classic Maya Texts*

This paper examines textual evidence regarding the entrada, the disruptive Teotihuacano intrusion into the Maya lowlands in 378 AD. I argue that the social actors described in the texts wielded symbolic as much as coercive power. By manipulating symbolic representations, individuals transform social realities, playing integral roles in structural change. Sahlins' structural-historicist approach provides a more nuanced understanding of the entrada and its consequences by explaining the intentions and motivations of human agents in terms of a conjunction of opposed Teotihuacano and lowland cultural projects. Recognizing agency more precisely situates individual actions within larger socio-historical contexts of interaction and domination.

[187] *Second Chair*

**Enloe, James (University of Iowa), Francine David (Laboratoire d'Ethnologie préhistorique, CNRS, Paris), Maurice Hardy (Laboratoire d'Ethnologie préhistorique, CNRS, Paris), Michel Girard (Laboratoire de Palynologie, CNRS, Valbonne) and Vladimir D'Iatchenko (Russian Academy of Science, Kunstkamera, St. Petersburg)**

[70] *Middle Paleolithic Spatial Analysis in Caves: Discerning humans from hyenas at Arcy-sur-Cure, France*

Continuing current excavations at Arcy-sur-Cure have confirmed the stratigraphic sequence of Leroi-Gourhan's test pits from the 1950's, and have expanded to capture potential spatial structure in the Middle Paleolithic occupation of the Grotte du Bison. Sparse lithic material of Typical and Denticulate Mousterian and abundant faunal remains attest to a mixed occupation by large carnivores as well as by Neanderthals. Size and spatial analyses are used to discriminate between zones principally attributable to the various occupants, as a basis for describing faunal acquisition and processing in the cave mouth. Discovery of new hominid fossil material is presented

**Enote, Jim**

[171] *Zuni Conversations About Social and Cultural Adaptation to the Influences of Spanish Entradas*

Most studies concerned with the influence of Spanish entradas in the Southwest have focused around accounts by members of these expeditions written during the sixteenth century. This

paper will highlight contemporary Zuni conversations that interpret the influence of these entradas on Zuni concepts of ownership, identity, beliefs and values and adaptation by Zunis to reconcile the differences. This discussion will also include on-site Zuni conversations at Hawikku, the village which saw some of the earliest encounters between Europeans and the indigenous people of North America.

**Eren, Metin (Southern Methodist Univer) and Mark Kollecker (Cleveland Museum of Natural History)**

[88] *You Tube: Broadcast Lithics*

There are few flintknappers on archaeology faculty. This translates into a small number of students exposed to proper knapping education. However, the Internet is increasingly pervasive in archaeological education. This poster suggests that archaeologists can take advantage of this trend in order to provide a more holistic learning experience of lithic technologies to students, the public, and even other flintknappers and professional archaeologists. The ease of posting flintknapping videos on the website www.YouTube.com can increase the understanding and awareness of lithic technology, as well as improve the status of flintknappers as possessors of specialized knowledge relevant to archaeological inquiry.

**Erlandson, Jon [165] see Braje, Todd J.**

**Ernenwein, Eileen (University of Arkansas), George Avery (Stephen F. Austin State University), Hiram Ford Gregory (Northwestern State University) and Michael Hargrave (US Army Corps of Engineers, Construction Engineering Research Laboratory)**

[53] *Geophysical Survey at Presidio Los Adaes, Louisiana*

A geophysical survey was recently conducted at the Los Adaes site, a Spanish military post, mission, and settlement located in northwest Louisiana. The site is historically important as a center for economic and social interactions among French, Spanish, and Caddoan peoples ca. 1721-1773. Archival records include an architectural plan for the presidio and a detailed map made in 1767 that shows the hexagonal presidio, mission, and surrounding structures. Portions of the presidio's palisade, bastions, the governor's house, and several outlying structures have been documented by excavations. This poster presents results of the recent ground-penetrating radar, magnetometry, and resistivity surveys.

**Esarey, Mark [186] Discussant**

**Esdale, Julie (Brown University)**

[49] *Archaic Raw Material Procurement and Tool Production Strategies in the North*

Many studies have demonstrated that lithic tool morphology is partly conditioned by tool production sequences. This same technological approach can be applied to entire lithic assemblages. An individual artifact assemblage is a sum of the tool production sequences of all possible raw materials. Evidence from several Archaic-age sites in the north suggests that assemblages result from the compilation of portions of several stone tool production sequences, which, in turn, depend on how and when raw materials entered the archaeological record.

**Eskenazi, Phoebe and Ronald Rood (Utah Division of State History)**

[188] *Hands-On Archaeology: Throwing Dirt with Fourth and Fifth Graders*

For several summers beginning in 2000, the Antiquities Section of the Utah Division of State History has been operating archaeology field schools for fourth and fifth graders in the Salt Lake City area. Affording optimal experiential learning, field school can raise the consciousness of young students across many disciplines. Most recently in 2007 Rood and Eskenazi with assistance from the Antiquities Section staff taught ten students over a three-week period. Students surveyed, established grids, excavated, processed artifacts and maintained field notebooks. Daily journaling along with research, group discussions and art activities completed a typical day.

**Espenshade, Christopher (New South Associates)**

[172] *Research Methods: Archaeological Study of PO-29*

Data recovery excavations at PO-29, south-central Puerto Rico, used a variety of methods to delineate and characterize this complex site. Geomorphological trenching, hand excavations of units and blocks, machine-assisted scraping, and hand excavation of cultural feature all provided data to address the research issues.

[172] *Second Chair*

**Espinosa, Guadalupe and Olaf Jaime-Riveron (University Of Kentucky)**

[148] *Diachronic Technological Study of Groundstone at the Olmec Site of Tres Zapotes*

In this paper we present the results of an analysis of groundstone technology at the Olmec archaeological site of Tres Zapotes. We incorporate ethnoarchaeological and geoarchaeological approaches in our technological analysis. In addition, we will present a visual database that allows us to manage multiple datasets.

**Esqueda, Marcela (University of Pittsburgh)**

[114] *Crafting Identity: A Case Study of Community Integration Through Pottery Production in Northwestern Honduras*

Communities develop under various conditions and some of their variation is attributed to the biophysical landscape, the selection of integrative symbols, external factors, and daily interactions. Recent research at the site of Las Caleras in the Cacaúlapa Valley of Northwestern Honduras suggests that a community identity based on shared activities and daily interactions rather than integrative symbols transcends limitations presented by the biophysical landscape. Despite environmental conditions unsuitable for potter production, pottery making was a community-wide activity. This paper examines the location, site form, environment and activities at Las Caleras, and discusses residents' identity as a communal, activity-based construct.

[114] *Second Organizer*

**Esterhuysen, Amanda (University of Witwatersrand) [7] *Discussant***

**Estévez Escalera, Jordi [85] *see Colonese, André Carlo***

**Estrada-Belli, Francisco (Boston University)**

[192] *Preclassic Lowland Maya settlement and environment at Cival, Peten, Guatemala: results of the 2008 season.*

Very rarely can Preclassic Maya settlement be observed on the surface unobstructed by later occupations. Recent survey and excavations around the ceremonial center of Cival afforded such a rare opportunity. Landsat imagery, GPS and foot survey enabled the mapping of scores of residential groups of various sizes within a 3km distance from the ceremonial center. The vast majority of Cival's residential groups date to the Middle and Late Preclassic periods. These data reveal the early development of urban settlement and land use patterns in the Preclassic period which were later re-affirmed by the Classic period Maya.

[192] *see Neivens De Estrada, Nina; [24] see Wahl, David B.*

**Etayo-Cadavid, Miguel [130] *see Jones, Kevin***

**Ethridge, Robbie**

[171] *Contact Era Studies and the Southern Indians: A Historiography*

Anthropologists, historians, and archaeologists have long pondered what happened to Native societies when they first met the Western world, and they have offered various models for understanding the dynamics that resulted from these encounters. These models have ranged from early twentieth-century ideas on assimilation, acculturation, and degradation, through the late-twentieth century processual models for culture change, social evolution and adaptation, to the contemporary paradigms generated out of world systems, practice, and hybridity theory. This paper examines the trajectory of scholarly thought on the contact era for the Southern Indians from Swanton through the contemporary era.

**Evans, Amanda (Louisiana State University), Barry Keim (Louisiana State University), Graziela da Silva (Nicholls State University), Jennifer Gardner (Louisiana State University) and Patrick Hesp (Louisiana State University)**

[26] *Oceanographic and Geomorphological Impacts to Potential Submerged Prehistoric Sites*

The interpretation of submerged prehistoric archaeological sites depends upon an accurate reconstruction of the geological landscape. Preservation of intact deposits is only possible in areas that have been protected from erosive processes. This paper will discuss the geoarchaeological investigation of three areas on the Gulf of Mexico Outer Continental Shelf. Specifically, the paper will identify the physical processes that have impacted the sites since the last glacial maximum. This information, including sediment deposition, wave energy, climate change, and storm activity, will be used to quantitatively determine the depth at which in situ deposits may be preserved.

[26] *First Chair*

**Evans, Susan (Penn State University)**[166] *Things Could Only Get Worse: Aztec Weavers Under Spanish Rule*

Aztec women produced wealth for their families through weaving, thus maintaining a cooperative household with complementary male-female relations, even in polygynous marriages. European intrusion worsened the status of women: they were sequestered and their value as productive members of the household declined as European workshop weaving was adopted, with men at the looms. The transformation of weaving reveals changes in the lives of native women as Aztec culture gave way to the values of the Spanish empire, and it highlights features essential to well-being and self-esteem: meaningful work, a public identity, economically worthwhile skills, and mutual respect in the household.

**Ewen, Charles [171] *Discussant*****Fang, Hui [145] *see* Cunnar, Geoffrey E.****Fargher, Lane (Purdue/Central College), Richard Blanton (Purdue University) and Verence Heredia Espinoza (Colegio de Michoacan)**[24] *Sacrifice, Social Mobility, and Public Assembly in Postclassic Tlaxcalan Politics*

Recently, scholars increasingly dissatisfied with marxist-neoevolutionary theory that prioritizes elite domination in state building have begun to search for models that better incorporate political strategies of the previous ignored subaltern. However, models of their behavior and participation in the construction of egalitarian ideologies and collective states remain underdeveloped. In this paper, we present archaeological and ethnohistoric research on Postclassic Tlaxcala that contributes to models of non-elite participation in state building. During the Late Postclassic, Tlaxcala coalesced as a powerful confederacy integrated through an egalitarian ideology that emphasized service to the state, social mobility, public assemblies, redistribution, and commercialization.

**Fariss, Barker (University of North Carolina at Chapel Hill)**[121] *A Preliminary Model for Site-wide Spatial Organization at Cerro Leon in the Moche Valley, Peru*

In 2007, a complete systematic survey of batanes (large grinding stones) was conducted at Cerro Leon, a fortified settlement and the political center of a highland colony in the middle Moche Valley. A team of investigators documented and mapped all planar stones with a "glass-like" polished surface encountered while combing 12 architecturally-defined site areas, roughly 50ha in total area. Combining the 2007 batan data with existing large-scale topographic and architectural surveys conducted in 2004, as well as multiple reconnaissance surveys at Cerro Leon, we have constructed a preliminary model of site-wide spatial organization.

[151] *see* Boswell, Alicia**Farnsworth, Kenneth [91] *see* Emerson, Thomas E.****Farr, Boyce [124] *see* Reinhardt, Eduard G****Farrell, Pat [150] *see* Benz, Emily J.****Fash, Barbara [169] *see* Fash, William L.****Fash, William (Harvard University) and Barbara Fash (Peabody Museum, Harvard)**[169] *What about Bob? Conjunctive Conjuring of K'uk' Mo' and Copan-Quirigua Connections*  
Robert Sharer's innovative research program in Quirigua made him uniquely qualified to help formulate and subsequently play a leading role in the long-term, multi-disciplinary research on Copan, its hinterlands, and its international relations. Bob's balanced "cross-cutting, self-corrective strategy" for investigating archaeological and historical questions at Quirigua and Copan enabled him to make substantive and theoretical contributions that supercede the Southeastern Maya realm. His methodological approaches and insights into the founding and demise of both dynasties are the focus of our discussions.**Fash, William [182] *see* Sugiyama, Nawa****Faught, Michael (Panamerican Consultants, Inc)**[26] *Comparison of Averaged Ages of Early Sites in the Western Hemisphere*

There are now more than 63 stratigraphic situations with evidence for human presence and two or more radiocarbon ages older than 10,500 BP to average for increased accuracy and

precision.. The distributions of these mean ages indicate earliest sites with great distance from each other in North and South America by 12,000 B.P., slightly later mean ages in Alaska, and the abrupt occurrence of Fluted and Fishtail Point sites at the beginning of the Younger Dryas climatic reversal (YD) in North and South America. Alternative interpretations and implications of the data will be discussed.

**Faulkner, Patrick (University of Queensland)**

[165] *Effects of human predation and the Anadara granosa dominated shell mounds of northern Australia: evidence from Blue Mud Bay, northeast Arnhem Land*

This paper explores the effects of human exploitation during the late Holocene of the sand/mudflat bivalve *Anadara granosa* in northern Australia. This species dominates many of the large shell mounds dating between 3,500 and 500 BP scattered across the north Australian coastline. By focusing on long-term changes in valve size and age structure from several shellmound and midden sites within Blue Mud Bay, compared with known environmental and climatic patterns, relative changes and trends through time in prehistoric resource exploitation are identified. In this way, long-term patterns of economic change and the role of shellmounds in the north Australian coastal economy are explored.

**Faust, Katherine (UC Riverside)**

[111] *Huastec Serpent Symbolism and Style*

Appearing on shell pectorals, painted pottery and stone sculptures, serpents were important elements in the cosmology and iconography of the Early Classic and Middle to Late Postclassic inhabitants of the Huasteca. This paper examines the symbolic meaning of reptilian motifs in Huastec art and explores how representational style and contexts of representation compare with similar imagery in vogue in other Mesoamerican regions. The goal is to explore possible sociopolitical and cultural historical relationships between the Huastec and other contemporaneous cultural groups, who together participated in wide-ranging spheres of interchange and shared systems of religious and elite symbolism recognized throughout Mesoamerica.

**Favela, Jacob (University of Arizona) and Pam Vandiver (University of Arizona)**

[130] *The Pigment Technology of Kostenki I-1*

This study involves the characterization of 50 colored lumps from a Paleolithic aggregation site, Kostenki I-1 near Voronezh, Russia, dating to 23,000 BP. Scanning electron microscopy and concomitant energy dispersive spectroscopy was employed to evaluate evidence of processing and then compared to material from local geological deposits, and ethnographic material gathered near the site. This study addresses behavioral correlates described by material selection, processing methodologies, and pigment use. As part of the greater Avdeev-Pavlov-Willendorf unity, the Kostenki cultural unit is used to illustrate the eastward diffusion of pigment technology through the Central Russian plain and across the Eastern Eurasian Steppe.

**Fayek, Mostafa and Sharon Hull (University of Manitoba)**

[168] *Fingerprinting Turquoise Provenance Regions in the American Southwest and Northern Mexico*

Isotopic methods are increasingly being used by Archeologists to source archeological artifacts. We used hydrogen and copper isotopes to fingerprint turquoise source regions in the southwestern United States and northern Mexico. This database is available to archeologists who wish to source turquoise artifacts recovered from sites located throughout the Greater southwest and shows that turquoise source regions can be uniquely characterized. Analysis of turquoise artifacts recovered from archaeological sites in the Greater Southwest shows that turquoise was procured from a number of different sources some of which are located hundreds of kilometers from these sites.

[168] *First Chair*

**Fayek, Mostafa [66] see Hull, Sharon K.; [168] see ten Bruggencate, Rachel E.; [168] see Hamilton, Anne C.**

**Fedore, Michael (University of Virginia)**

[173] *Cow Bones, Quahogs, and Colonialism: Food Choice as a Venue for Collaborative Archaeological Research*

This paper will discuss the faunal remains from two eighteenth-century Eastern Pequot sites and their relationship with Native people from that time period and today. The collaborative nature of this project endowed the research with a critical component, the voice of members of the current-

day Eastern Pequot Tribal Nation in southeastern Connecticut. Discussions with tribal members along with the application of theoretical concepts helped to illuminate particular components of these assemblages from the Eastern Pequot reservation (established in 1683) that were deemed particularly important. This interaction yielded interpretations that proved informative to both the tribe and archaeologists.

**Fenn, Thomas, John Chesley (University of Arizona), Marilee Wood (University of Witwatersrand) and Peter Robertshaw (University of Arizona)**

[168] *Early Islamic Commerce with sub-Saharan Africa: Chemical and Isotopic Analyses of Late 1st Millennium A.D. Glass Beads from Igbo-Ukwu, Nigeria*

Glass beads often are found on 1st-2nd millennium A.D. archaeological sites in sub-Saharan Africa. However, evidence for glass production in sub-Saharan Africa is not known before the early second millennium A.D. Thus, the source(s) of the glass beads and their trade routes are significant for interpreting social, political, and economic aspects of these sites. Glass beads from Igbo-Ukwu, Nigeria (8th-10th centuries A.D.), famous for its spectacular bronzes, have been chemically and isotopically analyzed to address these questions. Preliminary results indicate strong similarities to Near Eastern glasses, especially those from Iran. We narrow potential sources and discuss potential trade routes.

**Fenn, Thomas [13]** see *Huntley, Deborah L.*

**Fenton, Jason (University of Missouri-Columbia)**

[99] *Phytolith Indicators of Environmental Change in southern Trinidad*

Studies on environmental change provide information on the ecology of a region but also the impacts upon it by humans. By identifying components of plant communities, and by implication temperature, precipitation, and human activity such as clearing, phytoliths provide a record of how regional environments have changed over time. Phytoliths recovered from a soil core taken near the site of Cedros in southern Trinidad provide insight into the ecological dynamics taking place over 4,000 years. Phytoliths recovered from the Cedros core illustrate the ecological reality of early human populations in southern Trinidad, and indicate compositional shifts of plant communities.

**Ferguson, Jeffrey (University of Missouri), Karl Laumbach (Human Systems Research, Inc.), Stephen Lekson (University of Colorado Natural History Museum), Toni Laumbach (New Mexico Farm and Ranch Heritage Museum) and Virginia McLemore (New Mexico Institute of Mining and Technology)**

[18] *The "Ins and Outs" of Cañada Alamosa Archaeology: Compositional Analyses of Obsidian, Ceramics and Clay from the Cañada Alamosa, Socorro County, New Mexico*

The study of stability, movement and interaction has been the focus of the Cañada Alamosa project, located in west-central New Mexico. Few studies in the American southwest have integrated the compositional analysis of large samples of both ceramics and obsidian. Analysis of all the obsidian artifacts (n>500) recovered from the past decade of excavation and INAA of 400+ ceramics and local clays have revealed complex patterns of obsidian procurement and several distinct compositional ceramic/clay groups reflecting both local and imported vessels. These initial studies provide preliminary, but fertile, background for interpretation of stability, migration and exchange in the Cañada Alamosa.

**Ferguson, Jeffrey [49]** see *Coleman, Magen E.*

**Ferguson, T. (University of Arizona) [22]** *Discussant*

**Ferris, Jennifer (Washington State University)**

[44] *Central Place Foraging Theory and Toolstone Procurement Costs: Determining Source Distance from Lithic Debitage Reduction Techniques on Espíritu Santo Island, Baja California Sur*  
Understanding toolstone procurement costs, including acquisition and transport, directly links to the variation we see in lithic technological systems. A number of recent studies address this problem, yet interpretation is reliant on sourcing analysis and not all toolstone can be sourced. As a possible solution to this problem, I incorporate concepts from central place foraging theory to predict four characteristics of debitage that are sensitive to raw material source proximity. I focus on site J69E in Baja California Sur examining two debitage assemblages to determine if toolstone selection was predicated upon differential access and the costs of procurement.

**Fetterman, Jerry**

[144] *Orthodoxy in Northern San Juan: How the Eastern Anasazi Were Happy the Way They Were*

Data suggest the Eastern Anasazi were slow to, or never did, adopt certain architectural, artifactual and settlement changes that occurred elsewhere in the Anasazi world following the Basketmaker III period. Instead of concluding, based on these data, that the Eastern Anasazi were culturally backward, it might be more appropriate to conclude that they were culturally orthodox. It is apparent that the Eastern Anasazi both knew of the changes and purposely chose not to incorporate some of them into their culture.

**Fiedel, Stuart (Louis Berger Group)**

[9] *Abrupt Changes of Climate and of Point Styles in the Eastern US: How Were They Connected?*

From the Early Archaic through the Middle Woodland, Mid-Atlantic and Northeastern projectile point styles (e.g., stemmed, notched, broad, and narrow forms) came into and fell out of use periodically without any obvious technological, functional, or adaptive rationale. Many of these region-wide style transitions appear to be coeval with abrupt cold episodes (Bond events) in the North Atlantic and synchronous vegetation changes on land. During these episodes, male coalitions occupying disrupted (usually more northern) environments may have been fatally weakened, allowing rapid expansion and replacement by their competitors.

[9] *First Chair*

**Field, David (English Heritage)**

[91] *The investigation of Neolithic stone axe quarries and implement petrology in the UK*

Petrological analysis of stone for archaeological purposes began in 1923 when the bluestones at Stonehenge were determined to derived from a sources in southwest Wales. Protagonists of the method began to analyse the hundreds of stone axes that existed in museums and soon determined that they fell into categories based on different rock types. These became known as stone axe Groups. Some, such as Group VI were traced to sources and the quarry sites themselves investigated. Currently there are 34 such rock Groups and a considerable number of extraction locations have been identified.

[91] *Second Organizer*

**Field Murray, Wendi [157] see Cutright-Smith, Elizabeth**

**Fielding, Stephanie [173] see Bendremer, Jeffrey C.**

**Fields, Misty (UNLV)**

[18] *Sex & the Agricultural Transition: Biological Affects on the Dental Health of Early Agricultural (BC 1600-200 AD) Females at La Playa*

This project analyzed dentition from a sample (n=142) of Early Agricultural period skeletons from the site of La Playa (SON F:10:3), Sonora, México. Dental data were used to test the hypothesis that hormonal-fluctuations during pregnancy increase female dental pathology. Analysis identified significant differences in male-female rates for antemortem tooth loss, suggesting a strong biological component. Over their lifespan, women in the sample lost twice as many teeth as their male counterparts. Findings from the study, combined with clinical research on dental health and pregnancy, provide understanding of sex-based differences in oral pathology and the long-term impact to women's health.

**Fields, Rita [51] see Puckett, Heather R**

**Fife, R. Ashley [34] see Barnes, Zonna**

**Figueroa, Alejandro [117] see Wells, E. Christian**

**Figuti, Levy [165] see Gaspar, Maria Dulce**

**Filini, Agapi (El Colegio de Michoacan)**

[181] *Experiencing Teotihuacan: Stuccoed and painted ceramics from the Cuitzeo Basin, Michoacan, Mexico*

The exchange network of Teotihuacan involved a number of culturally distinct areas. Northern Michoacán participated in the network via the adoption of a specific number of artifacts. The present paper examines a local ceramic type, which can be considered a reproduction of the Teotihuacan stuccoed and painted ceramics. The present analysis aims at examining the

technique(s) of manufacture including recent results of XRD analysis, sample size and distribution, and the corpus of Teotihuacan-related motifs.

[181] *First Chair*

**Fish, Paul, Maria Dulce Gaspar (Museu Nacional, Rio de Janeiro), Paulo DeBlasis (Universidade de Sao Paulo) and Suzanne Fish (Arizona)**

[94] *Ecological Perspectives on Persistent Places in Southeast Coastal Brazil*

Persistent places with substantial and sustained populations are most often associated with fully agricultural communities in middle range and complex societies. We examine monumental sambaquis (huge shell mounds), often constructed and used over a millennium or more by foraging and fishing communities in southeastern Brazil, as an exception to this archaeological pattern. Our discussion considers how such long-term cultural and demographic stability could be achieved and maintained in the dynamic lagoonal setting of this coastal lowland region.

**Fish, Suzanne**

[87] *Food as Cultural Medium in the Prehispanic Southwest*

As a cultural category in which both entrenched traditions and exotic novelty might be situationally valued, food offers a meaningful but potentially complicated reflection of the identity and interactions of its consumers. Ethnographic records of food and prehispanic records during three intervals from A.D. 950 to 1450 are examined for cultural patterning in the U.S. Southwest. Interpretation focuses on plant foods in general and crops in particular, from production through provisioning.

[165] *Discussant*; [94] *see Fish, Paul R.*

**Fisher, Kevin (Cornell University)**

[86] *Re-thinking the urban revolution: the view from Bronze Age Cyprus*

Compared with its eastern Mediterranean neighbours, the island of Cyprus is remarkable for the rapid and rather late appearance of urban centres during the Late Bronze Age. These first cities are typically been seen as the by-products of new systems of production and exchange. Using an integrative approach to analyzing ancient built environments, I argue instead that these cities and the spaces that comprise them were purposefully constructed in order to facilitate social interactions that supported the objectives of powerful elites that emerged on Cyprus at this time. As such, the new urban centres were catalysts for far-reaching social transformation.

[86] *Second Chair* [86] *Second Organizer*

**Fisher, Lynn (Univ of Illinois Springfield), Corina Knipper (University of Tuebingen), Rainer Schreg (Römisch-Germanisches Zentralmuseum, Mainz) and Susan Harris**

[91] *Investigating Chert Sources and Quarries on the Swabian Alb, Germany*

The Swabian Alb plateau in southern Germany is a regionally important source of chert, but chert acquisition on the plateau has not been investigated. This contribution reports on a multi-year project that combines archaeological and geomagnetic survey with test excavation to identify high-quality chert sources and document their use during Neolithic times. We present results of excavations at Asch-Borgerhau, a Neolithic quarry with visible surface features resulting from excavations into chert-bearing clays. As the first chert acquisition site documented on the Swabian Alb, Borgerhau provides a basis for comparison with well-known quarries and mines of neighboring Bavaria.

**Fisher, Victor (Towson University)**

[189] *A Contribution to Environmental Archaeology from Landscape Architecture*

A new course in environmental archaeology is employing a model derived from landscape architecture. It is a basic scheme for evaluating the appropriateness of Ancestral Puebloan architectural adaptations to the semi-desert. In this paper it is argued that, although the model provides a very good starting point for discussions, there are some problems with it including the apparent biases of the architects.

**Fishman-Armstrong, M.A., Susan E. [135] *see Dunivent, Meggie***

**Fitts, Mary (University of North Carolina at Chapel Hill)**

[14] *Cofitachequi to Catawba: Pottery and Politics before and after the Indian Slave Trade*

Studies of the relationship between the sixteenth-century polity of Cofitachequi and the eighteenth-century Catawba Nation generally use archival sources to assert political discontinuity between these two entities. A comparison of pottery from Nassaw (38Yk434), a central town of the polyglot Catawba Nation of the 1750s, with late prehistoric assemblages from the Lower



Catawba-Wateree River Valley is presented as evidence for apparent continuity in the transmission of traditional cultural knowledge in the region despite epidemic disease, the Indian slave trade, and community relocation. Special attention will be paid to the ways epistemological differences inform historical narratives of continuity and discontinuity.

**Fitzpatrick, Scott (NC State University) and Torben Rick (Smithsonian Institution)**

[85] *Cataclysmic Events in Coastal Archaeology*

With an increased interest in how climatic events have shaped human behavior today and in the past, it is an opportune time to address three fundamental, but interrelated questions archaeologically: 1) how did humans in the past react to natural catastrophes; 2) in what capacity have humans modified or affected their coastal environments; and 3) what pressures do we face in protecting and preserving the coastal archaeological record? Answering these questions has implications for better understanding how we will respond to future events and the implications this has for preserving the past.

**Fitzpatrick, Scott M. [150]** see *LeFebvre, Michelle J.*

**Fitzsimons, Rodney (Trent University)**

[86] *Urbanization and the Emergence of the Greek Polis: The Case of Azoria, Crete*

Perhaps the most striking development accompanying the emergence of the Greek city-state (ca. 1200-480 B.C.) was the appearance of new urban centers whose form, contents and construction provided the most visible and effective means of creating, reinforcing and symbolizing the social, political and economic relationships that characterized the new "polis" system. Excavations at the site of Azoria (East Crete), conducted from 2002 to 2006, brought to light an unparalleled collection of architectural data largely unobscured by later building activities that provides one of the best opportunities to study the architectural correlates of state formation and urbanization in the Greek world.

**Flad, Rowan (Harvard University) [62]** *Discussant*

**Flaherty, Kevin V. [29]** see *Hill, Jr., Matthew E.*

**Fleisher, Jeffrey (Rice University)**

[8] *Archaeologies of Anxiety: The Materiality of Anxiousness and Worry*

An archaeology of anxiety recognizes the way that material practices were involved in the structuring, reproduction, and mitigation of emotional states of anxiousness and worry. This paper explores possibilities for an archaeology of anxiety, including bureaucratic anxiety and the techniques of power, social anxiety during times of environmental stress and warfare, personal anxiety of death and dying, and anxiety associated with changing notions of gender, personhood, and class. In all these cases, archaeologists not only recognize the way anxiety was constituted, but also how rites and performances attempted to mitigate and negotiate these emotional states.

[86] see *Wynne-Jones, Stephanie*

**Flint, Richard (Coronado Institute) and Shirley Cushing Flint**

[171] *Catch as Catch Can: The Evolving History of the Contact-Period Southwest, 1838-Present*

The beginning of modern interest in sixteenth-century Spanish occupation of today's American Southwest and northwest Mexico coincided with United States occupation of much of that same region almost 300 years later. The possibility of quick wealth to be had in the Mexican north pervaded the North American atmosphere for decades in the mid-1800s. The chimera of Spanish colonial wealth had a significant and lasting influence on portrayal of Spanish-led reconnaissance, conquest, and settlement of Tierra Nueva, as it was known in the sixteenth century. Only by fits and starts has study of the contact-period Southwest probed beyond those nineteenth-century perspectives.

**Flores, Jodi**

[178] *Modern Identity and the Past*

Often concepts of the past form the pillars of modern cultural identities, both of specific cultures and humanity as a whole. However these ideas are not always based on what would be considered tangible evidence. This paper analyses the way in which long held assumptions shape our research goals and how we as archaeologists present archaeological evidence and interpretations to society. Several case studies of current research will be presented in their historical and cultural contexts. The aim is to analyse how different research strategies maintain the status quo or challenge predominate cultural paradigms and the implications of such actions.

**Flores Blanco, Luis [119]** *see Craig, Nathan*

**Flores-Fernandez, Carola (UCSB) and Bernardo Broitman (Universidad Catolica del Norte (Chile))**

[85] *A critical review of the use of ecological data and the anthropological applications of coastal archaeology around the world*

The importance of interdisciplinary approaches to the study of prehistoric coastal societies has been stated in archaeological, anthropological and ecological studies. The study of past interactions between humans and their environments is essential for understanding current ecological and anthropological issues about conservation and management of marine resources. In this paper we present a critical review of published studies about coastal archaeology around the world, the nature of the ecological data used in these studies and whether or not these studies are applied on anthropological issues related to marine resource use. We propose new perspectives to combine coastal archaeology, maritime anthropology and marine ecology in order to complement the present understanding of present and past coastal adaptations.

**Florenzier, Diana [56]** *see Kowalski, Jessica A.*

**Flowers, Heather (University of Minnesota-Twin Cities)**

[61] *Peering through Odin's Eye: Issues Surrounding the Interpretation of Post-Roman Metalwork*  
The complex anthropomorphic and zoomorphic motifs that decorate northern European brooches and other metal objects of the fifth through seventh centuries AD are often interpreted using the more thoroughly documented symbolic traditions of Nordic Europe. I present an analysis of these motifs that examines the extent to which such motifs can be interpreted by archaeologists using temporally distant sources of information. I also suggest other approaches that can explore how visual material culture was used to express and influence social identity and ideology in early medieval Europe.

**Flynn, Erin and Dianna Doucette (Public Archaeology Lab)**

[153] *Life in the Pits: The Intriguing Task of Interpreting Deep Archaic Pit Features*  
Interpreting the function of features in New England, where preservation is poor and bioturbation runs rampant, is a daring feat for any archaeologist. Combining those factors with the restrictions often encountered by cultural resource management, such as limited time and budgets for fieldwork and analysis, is yet another challenge. Drawing on principals of site formation processes, this paper explores various interpretations for deep pit features identified at the J.T. Berry Site in Massachusetts, especially in light of similar features being found elsewhere in the Northeast.

**Folan, William (Centro des Invest Hist y Soc), Abel Morales Lopez (Universidad Autonoma de Campeche), Edwin Barnes (University of California, San Diego), Maria del Rosario Dominguez Carrasci (Universidad Autonoma de Campeche) and Raymundo Gonzalez Heredia (Universidad Autonoma de Campeche)**

[133] *Oxpemul, Campeche, Mexico: Its Fortified Royal Court, Emblem Glyph and Settlement Pattern Within the Calakmul Basin*

The fortified royal court of Oxpemul in the Peten Campechano, its emblem glyph, 23 stelae, 21 altars and 1400 structures is on the frontier between the Regional State of Calakmul to the south and Rio Bec to the north. Our 9 km<sup>2</sup> map illustrates an intensively occupied area inhabited by the ancient Maya including triadic temples, vaulted household groups, platforms and hydraulic features. A royal court and four additional bastions of authority are distributed in large groups raised on impressive platforms and terraces formed on mesetas at the edge of the central bajo, apparently enhanced for hydraulic control and intensive agriculture. All of this is nestled within the massive urban footprint of Calakmul, its regional state and surrounding geologic basin.

**Foley, Paul [69]** *see Wilkes, Stephen*

**Foley Winkler, Kathleen (University of Wisconsin- Milwaukee)**

[23] *2008 Investigations at the Schmeling Site*

During the summer of 2008, investigations at the Schmeling Site (47JE833), near the shores of Lake Koshkonong in Southeastern Wisconsin, recovered ceramic, lithic, floral, faunal, and radiocarbon data from features associated with a Developmental Horizon Oneota occupation. The data from Schmeling are compared to the nearby Crescent Bay Hunt Club site to discuss possible chronological and site use relationships during the late prehistoric period.

[23] *First Chair*

**Follensbee, Billie (Missouri State University)**

[73] *A Re-evaluation of Plant Motifs Depicted in the "Cave Mouth" Reliefs at Chalcatzingo*

Associated with Chalcatzingo's Formative Period "cave mouth" images are multiple depictions of tall, long-leaved plants. In 1987 Jorge Angulo suggested that these represent bromeliads, while many scholars before and since have suggested that they represent maize; I recently suggested that they represent maguey. In-depth investigation of regional bromeliads and agaves has revealed, however, that Angulo's conclusion was likely correct, although for reasons other than suggested. Analysis of the plant depictions identifies them as different sub-species of *Tillandsia*, while the historic uses of bromeliads and recent textile research indicate that Chalcatzingo's reliefs celebrate this plant as a source of textile fiber.

[73] *First Chair*

**Fontenla, Ruth [12]** *see Couture, Nicole C.*

**Fontes, Lisa (Hamilton College), Anna Prentiss (University of Montana), Curtis Osterhoudt (Los Alamos National Laboratory) and Nathan Goodale (Hamilton College)**

[44] *Tracing a Migration: A Study of Athapaskan Side Notched Points and Evolutionary Patterns*

The Athapaskan Migration represents an important event in the movement of humans and a very interesting case study regarding cultural transmission. However, it is critical for us to have the ability to recognize the quantitative signatures of the migration(s) in the archaeological record. In this paper we apply the Identity in Notched Points Index (INPI) to notched projectile points from purported Athapaskan related prehistoric sites from a large geographic area. This permits us to formally test models of Athapaskan migration and adaptation.

**Ford, Anabel (UCSB), Brienne Catlin (UCSB) and Frank Spera (UCSB)**

[110] *Nothing Is Simple: Identifying The Source of Late Classic Maya Volcanic Ash*

Using new techniques of the 20th century, Anno O. Shepard identified and precisely described fresh volcanic ash in pottery of the limestone Maya lowlands. For 80 years, her results have been used to identify the Late Classic. Her question of source remained unanswered. Collaboration of volcanology and archaeology is addressing the problem of source using new tools of the 21st century. The unique qualities of the source(s) are described petrographically and based on major and trace elements. Clearly an air fall source, we are closer to the answer that Shepard asked, but find complexities within the question.

**Forde, Jamie [99]** *see Whittington, Stephen L.*

**Foreman, Lindsay (The University of Western Ontario in London, Ontario)**

[23] *Late Woodland Pit Use in Southwestern Ontario: Faunal Insights into the Seasonality of Storage and Waste Disposal at Western Basin Sites*

Precontact groups in northeastern North America utilized subsurface pits for over 10,000 years. Each pit feature was excavated at a specific time for a specific purpose. Many pits were subsequently re-used, making the determination of pit function extremely difficult. This paper demonstrates how faunal remains recovered from these contexts can suggest seasonality of pit use and overall pit function at Western Basin Younger and Springwells phase sites. Faunal assemblages recovered from six of these sites, dating between A.D. 1000 and 1400, are examined. The seasonality of pit use is determined by the animal species recovered and their relative ages, while taphonomic factors such as bone size and evidence of burning are used to determine the primary, secondary, or tertiary nature of the deposits. These data provide further insights into Western Basin methods of storage and waste disposal.

**Forenbaier, Staso, Ksenija Borojevic (Boston University), Sheelagh Frame (Eastern Mediterranean University) and Timothy Kaiser (Lakehead University)**

[67] *Neolithic Mortuary Ritual at Grapèeva Cave (Croatia)*

Recent excavations at Grapèeva Cave, a major Eastern Adriatic Neolithic site, yielded ample evidence of ritual activity during the 5th millennium B.C. Structured deposits in the main interior chamber contained extremely high frequencies of artifacts, richly decorated pottery, a faunal assemblage indicating feasting, as well as scattered human remains. We argue that Grapèeva was a mortuary ritual site, where feasting, offering to transcendental powers, and secondary burial were taking place. The cave may have served as a place where memories were produced and maintained at a time when group history and genealogy were gaining importance.

**Forsyth, Danielle (University of Michigan), Danielle Forsyth (University of Michigan) and Hannah Wohltjen (Miami University, Ohio)**

[31] *Hearing Multiple Voices at Homol'ovi: Developing an Interpretive Podcast*

Interpretation of archaeological sites is shifting from a one-dimensional viewpoint to one that incorporates various perspectives. To incorporate multiple voices in the interpretation of an ancestral Hopi site at Homol'ovi Ruins State Park, a collaboration of archaeologists, Hopi people, and undergraduate students developed a podcast for the large pueblo site of Homol'ovi II. This poster describes the development of the podcast, which is an example of how archaeology and native viewpoints can work together to make interpretation of sites more available to the public and to convey important shared messages of stewardship and preservation in a Park with limited resources.

**Forsyth, Danielle [31]** see *Forsyth, Danielle*

**Forsyth, Donald**

[149] *Champoton and Regional Interaction in Prehispanic Coastal Campeche*

The site of Champoton in Campeche is known primarily as a Contact-period settlement on the basis of historic accounts. Recent investigations have revealed that the site had a much longer occupation than had been supposed. While Preclassic Champoton appears to have been related culturally to other communities in Campeche, during subsequent periods the region diverged significantly from the inland sites, maintaining much closer cultural connections to the Lower Usumacinta zone. In fact, current evidence suggests that Champoton may well have functioned as an important trade center through which goods entered the inland sites of the Northern Lowlands.

**Forsythe, Lauren A. [142]** see *Lapham, Heather A.*

**Fortin, Louis (Washington State University)**

[175] *Lithic Investigations Along the Tambo-Ilo Coast of Southern Peru*

Archaeological survey along the Tambo-Ilo intervalley coastline suggests a long range of human occupation stretching from the Preceramic through Spanish Colonial / Post-Colonial periods. By comparing the local geology, ecology and temporal setting, a better understanding of site occupation sequences is achieved. Artifacts were analyzed for variability in geologic material versus the local lithology. The broad study was to determine the lithic source identity, distribution, and regional cultural interactions of the inhabitants between the Tambo-Ilo drainages by examining variations in coastal anthropogenic landscapes, raw material availability and lithic resource procurement expressed in artifact assemblages.

[175] see *Goodman-Elgar, Melissa*

**Fortnam, Sara (IUP)**

[52] *Spatial Distribution and Proximity of Late Woodland Monongahela Settlements along the Laurel Highlands in Southwestern, Pennsylvania*

This poster presents the results of a spatial analysis of Late Woodland Monongahela settlements in the Laurel Highlands in Southwestern, Pennsylvania. During the Late Woodland, a linear pattern of some fifty recorded Monongahela settlements have been identified along the western edge of Chestnut Ridge, the westernmost ridge in the Laurel Highlands. Based on the fundamentals of Tobler's first law of geography, everything is related to everything else, but nearby objects are more related than distant objects, a line of sight and view shed analysis are used to determine the proximity and temporal relationships between settlements.

**Foss, John (Soils International, Inc.)**

[172] *Soils and Geomorphology of P-29 in the Portugues River Valley, Puerto Rico*

Archaeological site PO-29 is located on a terrace sequence in the Portugues River Valley. The initial soils investigation took place in July 2006 where 13 deep backhoe trenches were described on several terraces. Numerous discontinuities were noted and buried surfaces were found in most of the trenches. A more detailed investigation of the site was undertaken in November 2007. An additional 12 profiles were described at the site. The soils at PO-29 were formed mainly on alluvial deposits but colluvial sediments overlie many of the profiles. The alluvial sediments ranged from very gravelly loamy sand or sand to clay loam. Soil development ranged from minimal horizonation on the lower terrace to soils with argillic or cambic horizons on the upper terraces. Around the wall areas, many discontinuities were described, with former surface horizons sometimes extending to > 1.5 meters. In some instances, C horizons of relatively unweathered sediments separated former surfaces; these sequences indicate active deposition of sediment from colluvial and/or alluvial sources.

**Foster, Thomas (Univ. of West Georgia) and Georgina DeWeese (University of West Georgia)**

[142] *Dendrochronological Analysis of a Lamar Period Structure at Etowah (9BR1)*

Etowah is a nationally important Mississippian settlement in Northwest Georgia. It is well known because of investigations at mounds over the last hundred years. Less well known are the village excavations conducted by Lewis Larson between 1962 and 1973. The village excavations revealed a number of residential structures that date to Proto-historic era. In this paper, we describe a dendrochronological analysis of structural posts from a house that was burned.

**Foster, Thomas [135] see Dunivent, Meggie; [53] see Taylor, Marybeth**

**Fournier, Patricia (Escuela Nacional de Antropología e Historia) and Thomas H. Charlton (University Of Iowa)**

[166] *Historical Archaeology in Mexico: A Brief Review*

Overshadowed for many years by pre-hispanic archaeology, historical archaeology in Mexico during the last four decades has developed a body of data and theoretical models of great relevance to the anthropology of the Colonial and Independence/Republican periods. Research by ethnohistorians is now balanced by a materialistic archaeological perspective providing alternative interpretations of the dynamics operating within those periods. In particular this research emphasizes class, ethnicity, local and global economics, and colonial, and post-colonial developments. The field is rapidly expanding and making important contributions to our understanding of cultural dynamics within a part of the world greatly affected by European hegemony.

**Foutch, Amy, Bertram Mapunda (University of Dar es Salaam), Christopher O'Brien (California State University Chico) and Teresa Steele (University of California Davis)**

[145] *Understanding late pre-colonial, interior East Africa: Investigations at Kibaoni village, Tanzania*

The culture history of pre-colonial, interior East Africa is largely unknown. We report results of excavations conducted in 2004 at Kibaoni, a Pimbwe village located near Katavi National Park, southwestern Tanzania, which provided a long sequence of occupation with evidence that residents have been interacting with multiple groups in the interior for over 200 years. Our analysis contributes to the construction of a cultural history for the region and to our understanding of interacting spheres in late pre-colonial East Africa. Additionally, zooarchaeological research aids in assessing human impacts on the landscape through time, contributing to future conservation strategies.

**Fowler, William [2] see Sampeck, Kathryn E.**

**Fowles, Severin (Barnard College)**

[141] *Archaeology and the Second Commandment*

In this introduction to the session, I begin by asking whether archaeology has been complicit in the division of the world into (1) a broadly Biblical tradition within which the power of images as mediators is theologically contested and (2) a wide array of non-Western and/or pre-modern traditions in which it is assumed that the power of images is simply believed as a matter of course. Finding the answer to be "yes", I proceed to argue for an expanded archaeological iconology, one in which iconophilia and iconophobia are both viewed as universal aspects of the human entanglement with images.

[141] *First Chair*

**Fox, Jake (Radford University)**

[143] *Patterns of Community in the Formative Southern Andes*

In the southern Andes, the Formative Period saw the emergence of new kinds of communities, or social networks of interaction. Semi-sedentary and sedentary communities took hold in the context of emergent economic systems and diverse subsistence strategies, ranging from transhumant camelid pastoralism and agro-pastoralism to full-time agriculture. This paper investigates the diversity of forms that these early communities took and the socio-economic relationships that laid the foundations for their emergence. Early communities exhibited variable degrees of flexibility, durability, and integration at different scales. These early community patterns presented historic contingencies that conditioned later trajectories of socio-cultural change.

**Foxe, David (Texas A&M University)**

[179] *Chemical characterization of hunter-gatherer pottery from the South Texas Coastal Plain*  
 In this paper I will discuss the use of Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry to chemically characterize pottery assemblages from Late Pre-Hispanic hunter-gatherer sites on the South Texas Coastal Plain. Data from three site assemblages representing the Rockport and Toyah phases will be presented and the number of clay sources used at each site identified. Once evaluated, I intend to use this sourcing data to explore the relationship between mobility and labor investment in pottery production by mobile hunter-gatherer groups.

**Foxhall, Lin (University of Leicester)**

[124] *Greek settlement in southern Calabria: landscape, culture and identities*  
 The BMAP territory falls in the borderland between two classical Greek city-states, Rhegion and Locri Epizephyrii, providing an exceptionally valuable case-study for understanding the development of the Greek city-states of southern Italy in their landscape context. Greeks settled in the rural hinterland, apparently alongside the indigenous inhabitants, as early as the seventh century BCE, at about the same time as the urban centres were occupied. Archaeological survey and excavation reveal that this territory became a sparsely occupied, but complex and sometimes contested, classical countryside.

**Frachetti, Michael (Washington University)**

[21] *Early Bronze Age Pastoralism and the Inner Asian Mountain Corridor*  
 Archaeology of Inner Asia shows Bronze Age societies in northeastern steppe regions started keeping domestic animals only around 3300-3000 BC; over 3000 years later than in southwestern Asian economies. What was the source of these domestic animals and why was agriculture not spread as well? I propose that around 3500BC nomads living throughout a mountain "corridor" from the Pamir to the Altai Mountains were key agents in the diffusion of domestic animals to Inner Asia and were amongst the first socially connected and ecologically equipped populations to prosper in the mountains and foster the emerging Middle Asian Interaction Sphere.

[16] see Rouse, Lynne M.; [63] see Doumani, Paula N.

**Frame, Lesley (University of Arizona)**

[145] *Technological Change in Southwestern Asia: Comparing Metallurgical Production Styles and Social Values during the Chalcolithic and Early Bronze Age*  
 Early evidence for metal processing is found on the Iranian Plateau at a number of sites, some of which (e.g., Tal-i Iblis) represent large-scale smelting industries, whereas other sites, including Seh Gabi and Godin Tepe, contain similar crucible technology but with much smaller concentrations of production debris. Through compositional and microstructural analyses, and the use of a theoretical framework of technological change, this project considers the differences among these contrasting scales of production on the Iranian Plateau, in terms of technology and the possible social values placed on that technology. By linking technological changes to social values of the craftspeople, we can understand the role of technology in the cultural context of past communities.

[59] *First Chair*; [130] see Iizuka, Fumie

**Frame, Sheelagh [67] see Forenbaeh, Staso**

**Francis, J. Michael and Kathleen Kole (University of North Florida)**

[46] *From Gual to St. Catherines: The 1597 Gual Uprising and the Ethnohistory of St. Catherines Island*

This paper explores the early colonial ethnohistory of St. Catherines Island, and the repercussions of the 1597 Gual uprising. Based on a careful examination of documents from Spain's Archivo General de Indias, the paper attempts to explain the uprising and its aftermath within the broader context of Spanish-Indian relations in early colonial Florida. This approach not only sheds light on the history of the first Spanish mission on St. Catherines Island; it also reveals the complex web of alliances and conflict in Spanish Florida.

**Francis, Julie (WYDOT)**

[84] *Archaeological Methods, Rock Art and the Prehistory of the Bighorn Basin, Wyoming*  
 Application of traditional archaeological concepts and analytical techniques to the rock art of the Bighorn Basin has yielded important new data about the area's ancient history. This includes antiquity of the Shoshonean occupation of western Wyoming, the existence of ideological boundaries between Great Basin and Great Plains peoples, cultural diversity over time, and hints of conflict. As compared to other types of archaeological materials, which reflect long-term

adaptation and stability of Bighorn Basin hunter-gatherers, rock art data suggest a far more complex and dynamic culture history throughout the region.

**Franco Jordan, Règulo (Muerte e Identidades Moche - El Brujo)**

[15] *Poder, Muerte E Identidades En Las Tumbas Moche De Elite Del Complejo El Brujo, Costa Norte Del Peru*

El Complejo El Brujo ubicado en el litoral del valle de Chicama, tiene dentro de sus descubrimientos de 18 años de investigación, tres tumbas de elite encontradas en la huaca Cao Viejo que corresponden a diferentes Periodos de ocupación Moche. Una primera Tumba (Franco 2008) encontrada dentro de un mausoleo al interior del edificio principal, con características únicas hasta el momento, bautizada con el nombre de "Señora de Cao" (Moche I), que mantiene una conservación extraordinaria y que ha sido caracterizada como una gobernante del estado Moche Temprano en Chicama. Adicionalmente, dos tumbas de cámara fueron descubiertas en la plataforma superior, indistintamente en diferentes espacios: Una tumba correspondiente a una sacerdotiza anciana (Moche IV) (Franco et. al. 1999) que reocupó una tumba anterior (Moche II-III) de cámara funeraria policromada con representaciones de personajes de frente con armas y símbolos de poder. Otra tumba de cámara (Moche IV), correspondiente a un alto dignatario, cuyo cadáver no estuvo presente dentro del ataúd, considerando el contexto como un acto ceremonial de desentierro ritual (Franco et. al. 2001). A partir de los descubrimientos arqueológicos de Walter Alva en 1987 de las tumbas reales de Sipàn en huaca Rajada, el conocimiento sobre los patrones de enterramiento mochicas de elite fueron cada vez en incremento con los descubrimientos posteriores en la costa norte del Perú. En 1991, se descubrió la tumba de la Sacerdotiza de Moro por Christopher Donnan y Luis Jaime Castillo, a partir del cual, la identidad de estos personajes importantes se comparaba con la iconografía Moche, dando lugar a definir con la información de campo, que muchos de los personajes enterrados en estos sitios fueron protagonistas de ritos o ceremonias desarrollados en los templos o santuarios mas importantes del ámbito de expansión Moche. La identidad de algunos personajes ha sido comparado con el conocido tema de la iconografía Moche "La Ceremonia del sacrificio" o la "Ceremonia de Presentación", que ayudó en la definición del Personaje "A" (Señor de Sipàn), del personaje "B" (El Sacerdote o Buho mítico) y del personaje "C" (Sacerdotiza de Moro); faltando naturalmente por muchos años la definición del personaje "D", que acaba de ser descubierto en el Complejo El Brujo con la ubicación de la tumba conocida como "Señora de Cao" y últimamente una tumba descubierta en huaca Rajada por Luis Chero. Finalmente, la identidad en correspondencia con el rango de los individuos mochicas no necesariamente está en función de los niveles arquitectónicos en el que se les encuentra, sino mas bien, al parecer esta en función de ciertos criterios ideológicos que seguramente varían de acuerdo a algunas diferencias marcadas dentro de los territorios del norte y del sur.

**Franklin, Elaine (Center for Math/Science Education) [57] *Discussant***

**Franklin, Hayward (Maxwell Museum, UNM) and Kari L. Schleher (Maxwell Museum, University of New Mexico)**

[13] *On-ramps to the Glazeware Interstate: Ceramic Trade at Pottery Mound and Montano Bridge*  
Glazeware ceramic production and exchange reached a peak during Pueblo IV. Two contemporary Glaze A thru C pueblos along the Middle Rio Grande, Pottery Mound and Montano Bridge, are compared and contrasted with respect to their trade wares. Evidence of abundant ceramic imports is clear at both sites, although the direction of exchange is different. While Pottery Mound was oriented to the West, Montano Bridge contacts were to the East and Northeast.

**Franklin, Irina (U. of West FL & Florida Public Archaeology Network)**

[88] *Maritime Heritage Trails: A Model for the Apalachicola River*

This poster discusses preliminary research for developing a maritime heritage trail model for the historic Apalachicola River. Located in the panhandle of Florida, the Apalachicola River provides an excellent opportunity for public education and outreach. The goal of this research is to create an outreach tool that benefits the surrounding communities. By combining underwater, terrestrial, and historical resources, the Apalachicola River is an ideal location for a maritime heritage trail.

**Franklin, Kathryn (University of Chicago)**

[63] *Materialities of movement, structures of exchange: Mobility and landscape in the medieval Armenian Highlands*

Within historical and archaeological discussions, social life of the medieval Armenian Highlands is often characterized by trade and transport. Utilizing the analytical framing of GIS, this paper

works to conceptualize movement within centers and along the itineraries of the medieval Caucasus as a fundamentally social as well as economic phenomenon. This project investigates excavated material culture, aerial photographs and written histories: social, physical, and cognitive objects. Through the spatial systematization of such data, this paper aims to participate in wider Eurasian examinations of human movement through landscape as a structural and experiential dialectic, rather than as a straightforward sociopolitical vector.

**Frashuer, Anya (Arizona State University), Christopher Carr (Arizona State University) and Michael D. Glascock (University of Missouri Research Reactor Center)**

[53] *Alliance Development in the Ohio Woodland Period, as Expressed by Utilitarian Vessel Exchange*

A theory of the development of intercommunity alliance mechanisms, based on Slobodkin and Rappaport's theory of ordered sequences of adaptation and psychological theory, is tested using information on the changing frequencies of trade of utilitarian ceramic vessels within Ohio over the Woodland Period. The clay matrices of 204 vessels from 13 archaeological components, ranging from 400 B.C. to A.D. 1200, were analyzed for their absolute concentrations (ppm) of 33 major, minor, and trace elements with instrumental neutron activation analysis at the University of Missouri Research Reactor Center, allowing the identification of likely trade vessels and changing trade frequencies over time.

**Freas, Jessica (Indiana University of Pennsylvania)**

[134] *3D Scanning Using the NextEngine Generations for Artifact Analysis and Public Education*

The educational components of an archaeological project can be generated in many ways. One way is to use a NextEngine 3Dimensional scanner to capture images of artifacts that can be used to enhance websites or virtual reality environments. During the last two field seasons of the Pyla-Koutsopetria Archaeological Project on Cyprus, three female figurine bases were recovered during a pedestrian field survey and three dimensional scans of the figurines were captured using the 3Dscanner and are used in educational programs to provide students with new perspectives on ancient artifacts.

**Frederick, Charles [89] see Lohse, Jon C.**

**Freiwald, Carolyn (University of Wisconsin)**

[68] *Identity and the non-local population of Xunantunich, Belize: a contextual isotopic analysis*

The burial population of Xunantunich, Belize provides a snapshot of Late Classic interment practices in the Maya Lowlands. Burial contexts include tombs, ancestor shrines, caches, chultuns, and household locales within the medium size center and sites in its hinterland. Strontium, carbon, and nitrogen isotopes are used to 1) identify those born outside of the Belize River Valley and 2) assess the relationship between dietary variability and non-local origin. Preliminary findings that identify non-local individuals in most contexts have implications for the relationship between non-local identity and burial context and between the Belize Valley and other parts of Maya Lowlands.

**French, Matthew ( Cal-State LA), Christian Christensen (Los Angeles -- Denmark Archaeological Partnership), Sergio Garza (University of California, Riverside), Serinah Alexandri (California State University, Los Angeles) and Torben Redder (Los Angeles -- Denmark Archaeological Partnership)**

[115] *Death and Identity at Quen Santo, Huehuetenango, Guatemala: Analysis of a Newly Discovered Burial in the Ritual Fissure*

While surveying the edge of the western wall of the fissure at Quen Santo, a natural shelf was discovered seven meters below the surface. A total of five intact vessels were recovered and a thorough survey of the shelf was initiated. This led to the uncovering of a concealed entrance to a small natural chamber containing an adult burial with five polychrome vessels. All five vessels contained cremated human bone, suggesting that this was an ossuary feature. The feature is analyzed in relation to recent work at the site to draw inferences about the individuals interred there.

**French, Matthew [115] see Garza, Sergio; [115] see Alexandri, Serinah**

**Freter, AnnCorinne [152] see Abrams, Elliot**



**Fries, Eric (UCLA)**

[191] *The Pambamarca Regional Complex: Redefining An Archaeological Landscape*

There have been a number of archaeological surveys and studies of the Pambamarca fortress complexes and other features or groups of sites in the surrounding area. Each of these studies has focused on a particular aspect of the region's archaeology, but, with one exception, little emphasis has been placed on attempting to combine these data sets into a regional model. Often this has resulted in a narrow view of past human activity. This paper integrates the newest data with previous studies to depict an archaeological landscape which played host to a wide variety of activity and land use.

**Friesen, Max (University of Toronto)**

[143] *Stability and change in a seasonal community: Unraveling the history of a Late Dorset aggregation site in the central Arctic*

The Gadfael Site, in the central Canadian Arctic, is a large and complex Late Dorset aggregation site occupied over a span of several centuries. It represents the coalescence of otherwise smaller scale groups into a highly structured, if intermittent, community. Ongoing research at the site indicates that it was not a static entity; rather, it saw continuous change in the ways people interacted with social, ritual, and economic space.

**Frink, Lisa [77]** see Glazer, Dashiell

**Fritz, John (U Penn Museum Archaeology)**

[82] *Measuring the Mahanavami Dibba*

The so-called Mahanavami Dibba is the most prominent courtly structure in the royal centre of the 14C-16C southern Indian capital, Vijayanagara. Sometimes identified as the throne platform of the Emperor, the surviving parts of its four constructional phases consist chiefly of walls of stone blocks that form the sides of the high, stepped pyramidal platform. As part of his attempt to understand the history of construction of the building, the author measured all the blocks in the first three phases, and examples in the fourth. This paper discusses the problems and procedures of documentation and statistical analysis. It then discusses changing systems of construction and their possible role in changing conceptions of royal authority.

[21] *Discussant*

**Frohlich, Bruno [156]** see Wallace, Eliza N.

**Fruhlinger, Jake (Idaho Army National Guard)**

[51] *The Need for Native American Consultation in Properly Managing Cultural Resources*

Congressional intentions, as well as numerous Secretarial and Executive Orders stating that public agencies consult with Native Americans on issues relating to cultural resources on public lands and/or involving impacts to rights guaranteed by treaty, is widely known but often times not followed. Many agencies have difficulty grasping this concept and the steps taken, to achieve thorough Native American consultation. Since 1998, the Idaho Army National Guard (IDARNG) has been involved in a successful program for consultation. Wings and Roots Native American Campfire, has allowed the IDARNG to successfully meet its obligations for consultation through facilitation, mediation, and arbitration.

**Fujita, Harumi (Centro INAH, BCS)**

[47] *Prehistoric Occupation Of Espiritu Santo Island: Update And Synthesis*

Excavations conducted between 1996 and 2006 at 30 sites on Espiritu Santo Island in Baja California Sur reveal a long record of cultural occupation in caves, rockshelters, on mesa tops, and in shell middens. Cultural occupation began during the terminal Pleistocene at the Covacha Babisuri site and intensified during the early Holocene in open mesa sites. Most cave sites were used up to the contact period but mesa sites were apparently abandoned during the middle Holocene. Extensive shell middens were created after 4500 14C BP, first near mangroves in the backs of bays and later in the entrance of bays.

**Fukasawa, Yuriko (Tohoku University)**

[167] *The cultivation-prohibition model*

This paper presents the cultivation-prohibition model in order to explain social change. A prohibition system involving the imposing of legal controls, or restrictions and law, occurs always after the recognition of the act or the practicing of acts within a society. By understanding of the logic of a society and applying this logic to understand the structuring of landscape and social reality within Ainu culture, it would be possible to explain social phenomena in Ainu society. This

model is intended to enhance our perception of a social phenomenon in Ainu society and to make possible archaeological interpretation of it. Cultivation in Ainu culture was prevented by intentional ideology, in spite of its existence and extension in Ainu culture since the succeeding Satsumon culture.

**Fukuda, Hiroto [2]** *see Murano, Masakage*

**Fuller, Benjamin (Max Planck Institute for Evolutionary Anthropology), Colin Smith (Max Planck Institute for Evolutionary Anthropology), Kyungcheol Choy (Max Planck Institute for Evolutionary Anthropology) and Michael Richards (Max Planck Institute for Evolutionary Anthropology)**

[4] *Development of an LC-IRMS technique to measure carbon stable isotopes in amino acids from archaeological bone collagen*

The measurement of carbon isotopic ratios in amino acids can refine the reconstruction of dietary habits in past populations. Few studies have examined amino acid isotopic values in collagen, due to the difficulty of measurement. Using Liquid Chromatography – Isotope Ratio Mass Spectrometry (LC-IRMS), we have developed a method for the carbon isotopic analysis of the amino acids in human bone collagen in a single analytical run. This technological advance will be applied to archaeological bone collagen samples and will be used to better understand the bulk carbon diet to tissue trophic level effect (approx. 1 per mil) observed in humans during breastfeeding and weaning.

**Fullerton, Ben [53]** *see Nagaoka, Lisa*

**Furlong, Mary (Florida Public Archaeology Network)**

[72] *Saved by the Bell: Conducting Archaeological Research in High School*

During the 2008-2009 school year, the Florida Public Archaeology Network began working with a local high school to teach students anthropology and archaeology. FPAN staff worked with the teacher to develop a curriculum that combines an introduction to anthropology class with an archaeological field school at a site likely associated with Northwest Florida's brick-making industry. The site serves as an outdoor classroom for teaching real-world applications for math, language, and science skills through archaeological methods and research. This paper will briefly outline the organization of the class and introduce the archaeological and historical data uncovered by these students.

**Gabler, Brandon (University of Arizona)**

[18] *Aggregation, migration, and the environment: Quantitative approaches to the Puebloan occupation of the Pajarito Plateau, NM*

Ancestral Puebloan occupation on the Pajarito Plateau, New Mexico, has raised many questions throughout the US Southwest. A vanguard migration combined with climate change likely contributed to drastic population increase, shifting settlements, and rapid aggregation at the end of the Coalition Period (AD 1150-1325). This research combines the Los Alamos National Laboratory and Bandelier cultural resource databases to allow for spatial analyses following the proposed Tewa-Keres language boundary of Frijoles Canyon. A GIS investigation, data robustness assessment, and neural network analysis of the cultural resource database provide insights into the resilience of cultures along the Rio Grande Valley's mesa landscape.

**Gaines, Edmund, Guadalupe Sanchez (Instituto Nacional Antropologie e Historia) and Vance Holliday (University of Arizona)**

[18] *Geoarchaeology of El Gramal (SON N:11:20-21), A Multi-Component Site in Central Sonora, Mexico*

El Gramal (SON:N:11:20-21) is a large, multi-component site located in central Sonora, Mexico, 18 km from the modern-day Sea of Cortez shoreline. Discontinuous artifact scatters representing Paleoindian, Archaic and Ceramic period occupations occur on the edge of a large (3 km<sup>2</sup>) playa and extend over 10 km<sup>2</sup> into an extensive dune field. Dune stratigraphy exhibits at least three buried soils, and stratified archaeological remains have been recovered from depths of up to 3.5 meters below surface. Radiocarbon and Optically Stimulate Luminescence dating indicate that the site contains a nearly complete record of late Quaternary aeolian and alluvial deposits spanning the last 25,000 years. Our investigations to date indicate the possibility that the site preserves a well stratified archaeological sequence that represents terminal Pleistocene to late Holocene occupations.

**Gaines, Edmund [190]** *see Holliday, Vance T.*

**Galaty, Michael (Millsaps College)**

[63] *The Shala Valley Project: Using Interdisciplinary Anthropology to Study Isolation in a Remote Albanian Village*

The Shala Valley Project supports integrated programs of archaeological, ethnohistoric, and ethnographic research in the high mountains of northern Albania. The project's primary goal was to study the origins of the Shala tribe and its response through time to external powers. In 2005 we discovered a previously unknown fortified Iron Age site, called Grunas. Excavation results have allowed us to begin to compare modern (15th-21st century), tribal patterns of settlement and land use to those of the prehistoric period. It seems likely that Iron Age peoples sought refuge in the mountains for reasons similar to those of the current residents.

**Galiano Blanco, Vicentina [45]** *see Belisle, Veronique*

**Gallareta Cervera, Tomas (UNC-CH), Anna Catesby Yant (Vanderbilt University) and Rossana B. May Ciau (Facultad de Ciencias Antropológicas de la UADY)**

[154] *Change and Continuity in a Puuc Urban Center: Structures N1050E1065 and N1065E1025 from the Yaxché Group, Kiuic, Yucatán*

This paper focuses on excavations of two major structures in the Yaxché group, an architectural complex defined as a "palace" in the urban center of Kiuic, Yucatán. The archaeological materials recovered in the different stratified contexts indicate a complex history of construction that ranges from the Middle Formative to the Late/Terminal Classic. This history is used to examine transformations in diverse spaces of the urban center. A comparative analysis of similar Maya structures and groups in the Puuc region offers insights into the evolution, and meaning of both monumental architecture and the nature of urbanism in the northern Maya lowlands.

**Gallareta Negrón, Tomas (INAH)**

[154] *Karst Landscape and Settlement in the Labná-Huntichmul Hinterlands*

The detailed data recorded in the first three square kilometers of the transect survey between the sites of Labná, Huntichmul, and Kiuic shows the existence of a suburban area and a minor center, both with residences for elite members living close to natural resources. A least cost pathway between Labná and Huntichmul gives us clues on the way the natural landscape was used for marking and protecting the boundaries between the main settlement units.

[19] *Discussant*

**Galle, Jillian (Monticello), Derek Wheeler (Monticello), Fraser Neiman (Monticello) and Leslie Cooper (Monticello)**

[99] *Sugar, Slaves, and STPs: Preliminary Results from Nevis*

We describe preliminary results from STP surveys of the slave-village sites associated with two sugar plantations on the island of Nevis, in the eastern Caribbean. On both plantations we identified two villages, one dating to the 18th century and a successor settlement from the early-19th century. STP methods reveal for the first time the internal structure of these sites and allow us to date the occupations with accuracy. The results point to synchronous and similar settlement shifts on both plantations, linked to changes in sugar production strategies.

**Gallivan, Martin [173]** *see Hantman, Jeff*

**Galvan, Melissa [154]** *see Hill, Rebecca E.*

**Gamble, Lynn (San Diego State University) and Michael Wilken-Robertson (San Diego State University)**

[47] *Cultural Landscapes of the Kumeyaay Indians in Northern Baja California*

The cultural landscape of the Kumeyaay of northern Baja California includes the sacred, symbolic, economic, and mythological views of a people who lived in the region for centuries. Recent research incorporates ethnographic, ethnohistorical, and archaeological information that reveals a landscape that is alive and imbued with power, sustenance, and legend. Kumeyaay place names abound, and sacred sites, peaks, transformed rocks, magic boulders, and other geographic features associated with oral tradition populate the landscape. Ecosystems and areas of historic significance represent direct links with generations of ancestors and are still layered with meaning in the minds of descendants.

**Garcia, Krista (University of Alabama)**

[102] *Evaluating Market Exchange: Using Late and Terminal Classic Maya Ceramics from the Upper Belize River Valley*

This diachronic study tests the argument that a market economy developed in the Maya Late and Terminal Classic period (AD 600-900) in the upper Belize River Valley, Belize. Two common ceramic groups and forms (Mount Maloney bowls and Cayo jars) from three sites (Actuncan, Xunantunich, and San Lorenzo) are sampled to investigate changes in production and standardization. A market economy should affect production, leading to increased specialization. Specialization should be evidenced in increased standardization of goods. Rim sherds are measured to evaluate changes in standardization and variability. Petrographic thin-section analysis is used to compare paste compositions across sites and phases.

**Garcia, Santiago (CSUF Anthropology, Grad.)**

[92] *The Feathered Serpent: An Example of Continuity and Change in Mesoamerica*

Studies on the topic of the feathered-serpent have focused on its contributions in the spread of Mesoamerican culture – primarily during the Classic and Postclassic period. This paper takes a different approach in that it examines the continuity and change of the feathered-serpent from the Formative to the Classic period. Data used will include feathered-serpent imagery from various art objects (i.e., monuments, relics, rock art) from sites in the Gulf Coast, Central Mexico, and the Maya region. The study has both archaeological and cultural significance as it explores the antiquity of the feathered-serpent and its role in early Mesoamerican society.

**García, José María [38]** see *Pereira, Gregory*

**García, Oreto [130]** see *McClure, Sarah B.*

**Garcia-Herbst, Arleen (ASM Affiliates, INC./UC Santa Barbara)**

[155] *Fire on the Mountain: Archaeology in Palomar Mountain State Park before and after the 2007 Witch/Poomacha Fires*

Wildfires are both destructive and constructive natural events. The 2007 Witch/Poomacha Fires burned 247,400 acres and 1867 structures. However, they created opportunities for archaeologists to assess previously densely vegetated areas of Palomar Mountain State Park, San Diego County, California, which now had very good ground surface visibility. This paper will summarize research in the park up to 2007 and then present the results of new archaeological studies conducted as part of a power pole replacement and re-alignment project by SDG&E, as well as several Natural Resources Conservation Service projects for the removal of dead, dying and diseased trees.

**Gard, A. Rowan (Graduate Student, University of Hawaii, Manoa) and Terry Hunt (University of Hawaii, Manoa)**

[145] *Isotopic Analysis and the Role of the Polynesian Rat in Rapa Nui Prehistory and Paleoenvironmental Change*

Examining the paleodiet of the Polynesian rat, from an isotopic perspective, offers further insight into the history of deforestation that occurred on Rapa Nui. This study explores the diet breadth of Polynesian rat faunal remains from excavations at Anakena. Analysis of *Rattus exulans* bones provides sufficient mass spectrometry data (e.g.  $\delta^{13}C$  and  $\delta^{15}N$ ) to document isotopic differences among samples from Rapa Nui. These data add to an emerging picture of the total feeding regime of *Rattus exulans* and offer implications for human-environmental relations in the prehistoric Pacific.

**Gardner, A. Dudley (Western Wyoming College), Gabrielle Elliott (Bureau of Land Management), Laura Pasacreta (Western Wyoming College) and William Gardner (Yale University)**

[41] *High Elevation Cultivation at Middle Latitudes in Northwest Colorado from ca. 500 -1500 BP*

The fringes of cultivation of Formative Cultures in the mountain west have been looked at but the margins of this cultivation not refined as to location and extent. In this paper we will use a combination of remote sensing, survey, and excavation to delineate the extent of cultivation in a high elevation valley in western Colorado. We will present how and why the Fremont cultivated maize in a valley that was once considered too high in elevation to sustain farming activities. We will also look at other crops that this Formative Culture cultivated at high elevation sites between 500 and 1500 BP.

**Gardner, Andrew (University College London)**

[177] *Discipline and discord: the paradoxical lifeworld of soldiers in Roman armies*

Soldiers in Roman armies bore much of the institutional weight of the Roman empire. The lives that soldiers lived were heavily disciplined temporally and spatially, and from the archaeology of the places in which they dwelt, and the equipment that they used, we can gain some sense of the bodily transformations involved in becoming a Roman soldier. At the same time, a more discordant side of Roman military life existed. As well as being the force that kept the empire together, soldiers embodied many of its tensions, being at the heart of struggles over what it meant to be Roman.

[177] *First Chair*

**Gardner, Jennifer**

[163] *Bridges, Trains, and Boats in Salisbury*

The isolation of the Lower Eastern Shore Directly affected the economic growth and development of Salisbury, Maryland. For almost two centuries the town of Whitehaven was the main focal point for merchants on the Wicomico River, but at some point that all changed and the merchants moved upriver to Salisbury. As a result Salisbury, not Annapolis, has been the second largest port in Maryland. Watercraft of all sorts played a main role in the Eastern Shore's economy until the introduction of trains and the construction of the Bay Bridge. These investigations will draw on the results of a survey that was conducted last year on the Wicomico River, where nine shipwrecks were found.

[26] *see Evans, Amanda M.*

**Gardner, William** [41] *see Gardner, A. Dudley*

**Garfin, Timothy (California State University Long Beach), Paul Buck (Desert Research Institute) and Sachiko Sakai (University of California Santa Barbara)**

[174] *Can Chert Sources be Distinguished Geochemically using ICP-MS?*

The ultimate goal of this poster will be to understand potential resource procurement patterns utilized for chert artifact production in the Mount Trumbull region of the Arizona Strip. The point of origin for the various chert elements will be determined; prior to sourcing the chert collected, the feasibility of sourcing with LA-ICP-MS will be evaluated. Source materials from the Mt. Trumbull region, as well as distant areas will be included in this evaluation to see if any chemical variation can be detected by LA-ICP-MS.

**Garfinkel, Alan P.** [88] *see Binning, Jeanne Day*

**Garrett, Natalie and Natalie Garrett (U.S. Army Corps of Engineers, Jacksonville District)**

[90] *CERP Cultural Resources Overview: A Collaborative Effort Toward Identification and Protection*

The Comprehensive Everglades Restoration Plan may affect many archeological sites in South Florida. Meeting Section 106 requirements of NHPA for CERP affords archeologists with an opportunity to expand the knowledge of cultural resources in South Florida. Three documents emerged from the collaboration of USACE, SFWMD, SHPO, and respective contractors to meet this challenge. They represent the commitment of the Cultural Resources Team to identifying and protecting cultural resources in the CERP area. The Cultural Resources Overview was developed as a method to identify and protect the unique cultural legacy of the people who have occupied South Florida and the Everglades.

[90] *Second Organizer*

**Garrett, Natalie** [90] *see Garrett, Natalie S.*

**Garrett, Zenobie (New York University)**

[96] *Sutton Hoo: a case study in the chaîne opératoire of burial technology in Anglo-Saxon England*

Recent scholarship defines "technology" as "the processes and practices associated with production and consumption, from design to discard" (Miller 2007). In this paper, I will approach burial landscapes as a technology and use the chaîne opératoire to study the site of Sutton Hoo in the Anglo-Saxon kingdom of East Anglia. I will also draw on evidence from defensive structures to compare construction methods. In doing so, I illustrate the conceptualization component of these burial mounds, and how that informs our interpretations of Anglo-Saxon society, and address the potentials and limitations for studying landscape as a form of technology.

**Garrison, Thomas (Brown University)**[113] *Cosmological Ideals and Physical Realities in Maya Territorial Organization*

The ancient Maya conceived of the universe as having three tiers including the heavens, earth, and underworld. Every effort was made to reconstruct this cosmological model during the building of ceremonial centers and the establishment of political territories. Even though this cosmological ideal was rarely achieved in a physical sense, the Maya would still reference the ideal when speaking of their territory in written texts. Archaeological investigations show us that the physical realities of Maya territorial organization were directly related to other factors such as the location of natural resources, natural topography, and proximity to other major centers.

**Garza, Sergio (University of California, Riverside), Matthew French (California State University, Los Angeles) and Serinah Alexandri (California State University, Los Angeles)**[115] *Altars, Guardians, and Idols: Sacred Spaces at the Cave Complex Quen Santo in Huehuetenango, Guatemala*

In their interpretation of the ritual space, archaeologists have tended to focus on imposing sacred landmarks at the expense of less visible but nonetheless important features such as altars, niches, and guardians. This interaction of animate, sacred features is articulated at the cave complex of Quen Santo wherein the creation of sacred space mirrors the cosmological organization of the ancient Maya. Ethnographic data among the Chuj and other Maya groups indicate cosmological connections that are represented and performed through rituals and physical objects in this sacred realm where humans and nature converge all, past, present and future spaces.

**Garza, Sergio [115]** see French, Matthew Patrick; **[115]** see Alexandri, Serinah

**Gaspar, Maria (Museu Nacional), Daniela Klokler, Levy Figuti (Universidade de São Paulo), Marisa Afonso (Universidade de São Paulo) and Paulo DeBlasis (Universidade de São Paulo)**[165] *Monumental shell mounds (sambaquis) from the southern Brazilian coast*

The Brazilian coast was intensively occupied by fisher-gatherers and sambaqui type sites abound in coastal regions characterized by the presence of rivers and lagoons. These sites have diverse dimensions but most have a maximum height of 5 m. In the southern coast, however, archaeologists find monumental sites that can have over 30 m in height. Built between 6000 and 1500 BP, they are composed by shell and bones of aquatic animals. Human burials are present in all sites, and in some cases their construction is related with the repetition of rituals involving funerary feasting.

**[165]** Second Chair **[165]** Second Organizer

**Gaspar, Maria Dulce [94]** see Fish, Paul R.; **[139]** see Mandarino, Marcelle Costa

**Gasparyan, Boris [50]** see Areshian, Gregory E.

**Gauthier, Gilles [88]** see Leclerc, Mathieu

**Gblerkpor, William (University of Ghana)**[107] *The Search for Krobo Identity: Archaeological Survey of the Klowem, Ghana*

Ongoing archaeological survey of the ancestral settlement of the Krobo, Klowem has provided a broader insight into the identity of the Krobo. The study forms part of a collaborative archaeological research project between the University of Ghana, and the local community. The paper will examine how the involvement of the descendants in the study has enhanced our understanding of the group. The ways in which prompt sharing of research information with the descendants has enhanced the project's activities will be discussed. The paper will also demonstrate how similar projects are influencing socio-cultural, political, and economic policies and activities in Ghana.

**Gear, W (Red Canyon Ranch) and Linda Cummings (Paleo Research Institute)**[176] *People, Food, Residues, and Meals*

Food and medicine have been important not only to human survival, but contribute to the image of "self". Modern technology offers both "new" and more "traditional" analyses that contribute to our understanding of these vital parts of life. Innovative cooking methods, such as use of "cooking clays", to the ubiquitous (in some areas) FCR often contain clues to local diets. Newer methods of identifying organic residues through the use of FTIR (infra-red) add considerably to our understanding of diet and, combined with more traditional analyses, contributes to our ability to understand diet, meals, and nutrition.

**Geib, Phil (University of New Mexico) and Carrie C. Heitman (University of Virginia)**

[66] *Reconsidering Maize Pollen Counts from Chaco Canyon Based on Experimental Findings*

The economic and social importance of maize to the prehistoric residents of Chaco Canyon seems certain. Recent evidence points to both local and non-local sources of corn production, further complicating our understanding of subsistence patterns and the symbolic importance of corn during the Chacoan era. In this paper we revisit pollen data generated by the Chaco Project to discuss patterns of corn production and processing. We argue that recent experimental research changes our understanding of the frequency and distribution of pollen at various sites within the canyon as well as the cultural practices associated with maize agriculture.

**Geller, Pamela (University of Miami)**

[169] *The Devil In The Details: The Life And Death Histories Of Maya Commoners*

Robert Sharer's multi-scalar study of the pre-Columbian Maya ranges from the broad development and transformation of civilization to the idiosyncratic and personal. Focusing on the latter, Sharer's collaborative work at Copan has illuminated royal movers and shakers. His careful attention to physical, historical, and social contexts has revealed the devil and the deified in the details. Despite poor preservation and a dearth of epigraphic data, Sharer's approach can similarly be utilized to reconstruct commoner social identities, medico-religious practices, and economic interactions. Examples come from my research in northwestern Belize.

**Genheimer, Robert (Cincinnati Museum Center)**

[152] *Return to Newtown: Systematic Salvage Excavations at the Newtown Firehouse Site*

In 1981, the Newtown Firehouse Site near Cincinnati, Ohio produced a pair of spectacular engraved marine shell gorgets (mountain lion and opossum) and additional Woodland-age artifacts in association with human burials. Salvage operations in 2006 uncovered an additional five burials, four of which contained grave goods, including an adult male with a marine shell crescentic gorget. Large quantities of pottery, animal bone, and lithic waste were recovered within a deep (ca. 60 cm thick) and dense midden near the burials. While much of the ceramics and artifacts are consistent with a Late Woodland occupation, some lithics are suggestive of a Hopewell horizon.

**Ghazal, Royal (University of Chicago) and Andrew M. Bauer (University of Chicago)**

[155] *A Political Ecology of Oasis Settlement in Bronze Age Oman: Review and Preliminary Remote Sensing Observations*

Archaeological research has revealed that widespread settlement began in the northern oases belt of the Hajar mountain range during the early Bronze Age (3100-2000BC), resulting in the transformation of natural oases "forests" into anthropogenic environments. In this paper we review a combination of archaeological data, supplemented by multi-spectral remote sensing analyses, to investigate questions related to concurrent sociopolitical transformations and changes in ancient settlement patterns, land-use, and the development of irrigation systems in the oases zones of the mountainous northern interior region of Oman.

**Giersz, Milosz [60]** see *Przadka-Giersz, Patrycja*

**Gifford, Chad (Columbia University), Ana Lucia Gonzalez (University of Hawaii), and Samuel Connell (Foothill College)**

[191] *Domination and Resistance on an Inka Frontier: A Case-Study by the Pambamarca Archaeology Project in Northern Ecuador*

The Inka Fortress Complex in Pambamarca (Ecuador) is first and foremost a military installation. As such there is a tremendous amount to be learned about the violent nature of Inka expansion and local resistance in Northern Ecuador from the study of the region. With a primary focus upon archaeological data the papers in this session present various aspects of the research that have been conducted since the inception of the Pambamarca Archaeology Project in 2002. A brief introduction will open the session, providing an overview of the relevant physical, social and research contexts that have informed the work.

[191] *Second Organizer*

**Gifford, Chad [162]** see *Connell, Samuel V.*

**Giannini, Paulo C. F. [85]** see *DeBlasis, Paulo*

**Gijanto, Liza (Syracuse University)**

[78] *From the Interior to the River: Africans, Europeans, and Creoles on The Gambia River During the Atlantic Trade*

The Gambia River was connected to many of the major trade systems in West Africa, with direct ties to the Saharan and Atlantic networks. Prior to the arrival of the Portuguese, Mandé traders traveled from the inland Niger delta to the coast trading gold and other commodities for salt. In the mid-15th century, Portuguese merchants initiated commerce along the river, ultimately reorienting trade patterns in the Senegambia from interior land-based to Atlantic maritime. This paper presents findings from archaeological and historical investigations at the Niimi trade center of Juffure as well as peripheral villages of San Domingo and Lamin. The overall focus of these investigations is to examine potential changes in daily life due to shifts in interactions and commerce from the 15th to the 19th century.

**Gillam, J. Christopher (University of South Carolina (SRARP-SCIAA)) and Carlos Zeballos Velarde (Research Institute for Humanity and Nature (RIHN), Kyoto, Japan)**

[167] *Modeling Cultural Landscapes and Landscape Change in East Asia*

The Neolithization of East Asia extended over many millennia (ca. 16,000-3,000 CALYBP) and witnessed dynamic changes in culture and corresponding cultural landscapes. An integral part of the Neolithization and Modernization of East Asian Inlands Seas (NEOMAP) project has been the design and implementation of advanced archaeological GIS databases to explore the development and change in cultural landscapes throughout the region. This paper highlights techniques for modeling cultural landscapes and landscape change, such as prediction, caloric cost modeling, least-cost path analysis, and territorial modeling, that can be applied in East Asia and other regions throughout the world.

[167] *First Chair*

**Gillam, J. Christopher [167]** *see Uchiyama, Junzo*

**Gillespie, Susan (University of Florida), Joshua Toney (University of Florida) and Michael Volk**

[99] *Mapping La Venta Complex A: Archival archaeology in the Digital age*

La Venta, Tabasco, was the principal Olmec center in Middle Formative Mesoamerica. Its main ceremonial precinct—Complex A, excavated by Robert Heizer and Philip Drucker in 1955—was destroyed by development soon afterward. Heizer declared the 1955 map as “the best we’ll ever have,” although it has confounded archaeologists ever since. Fortunately, the Heizer papers at the National Anthropological Archives hold the original field notes and maps, including hundreds of elevations never published. Using GIS and Auto-CAD applications, these data allow for “new” maps of Complex A, including 3D visualization and more accurate renderings of profiles than were possible in 1955.

**Gillespie, William B. [189]** *see Laluk, Nicholas C.*

**Gillette, Donna (University of California, Berkeley)**

[84] *Markings on the Landscape*

The landscape provides a visible backdrop for pre-historic activities – where early people were moving about in the course of daily living. The evidence of their presence is left in habitation sites, camping spots, lithic scatters, quarries, and on marked boulders that may confirm ritual activities. With trails as connective tissue, can a relationship be determined that might identify who marked the boulders? Landscape theory provides a conceptual framework to ‘unpack’ the evidence of human pasts on the landscape. The PCN (Pecked Curvilinear Nucleated) tradition occurring in the Coastal Ranges of California provides a case study for applying landscape theory.

**Gillis, Nichole (Public Archaeology Laboratory, Inc.)**

[29] *The Ferndale Site: An investigation of Charles Culture housepit deposits in northwestern Washington State*

Excavation of the Ferndale Site (45WH34) in northwestern Washington provided information about two structures built and occupied between ca. 5300 and 4400 BP. While previous investigations believed the Ferndale Site represented occupation spanning the past 5,000 years, the current analysis does not support this conclusion. Observed similarities with other Charles Culture assemblages, and new integrated analysis of stratigraphy and radiocarbon data suggest the Ferndale Site was occupied for a period of about 1,000 years. The Ferndale structures exhibit shared characteristics with those identified at other Charles Culture sites including Hatzic Rock and Maurer, as well as ethnographic pithouse dwellings.



**Gillmore, Gavin, Doug Sims (Kingston University, Centre for Earth and Environmental Science Research) and Peter Hooda (Kingston University, Centre for Earth and Environmental Science Research)**

[175] *Environmental contamination associated with historic mining and milling within Nelson, Nevada, USA*

Movement of contaminated soils (from historic mining) in arid climates is often regarded as being negligible and not a threat to the wider environment. However, storm events in Southern Nevada involve short time period high volume precipitation, resulting in flash floods. Understanding the delivery mechanism for metals (i.e. As, Hg) and other contaminants (CN-) is important because the movement of soils during summer monsoons is significant. Results from 3 wash systems indicate elevated metals and CN- throughout, with HG and CN- 30-95 times greater than background. Downstream soil characteristics may highlight the locality of unknown pollution sources (abandoned mines).

**Gilman, Patricia (University of Oklahoma), Elizabeth Toney (University of Oklahoma) and Nicholas Beale (University of Oklahoma)**

[94] *Late Archaic Agriculture in the Southwestern United States*

Recent research has focused on Late Archaic agriculture in the southern Southwest of the United States. In at least two places, the Tucson Basin and northern Chihuahua, agriculture was relatively intensive, while in others it was apparently not. Using the perspective of historical ecology, we examine both how the different trajectories involving agriculture played out as well as the possible explanations for these differences. Specifically, we compare selected regions of the Southwest to the well-known data from the Tucson Basin.

**Gilpin, Dennis (SWCA Env. Consultants) and Kelley Hays-Gilpin (Northern Arizona University / Museum of Northern Arizona)**

[13] *Polychrome Pottery of the Hopi Mesas*

Because of its highly durable, coal-fired technology and unique yellow color, widely traded Hopi yellow ware pottery was (and is) instantly recognizable as having been manufactured only at Hopi. Yet Hopi pottery was born of the "migration period" in Hopi history, forged from many traditions and innovations. This presentation traces Hopi polychrome pottery from the late 1200s through the 15th century development of Sikyatki Polychrome, a trajectory that resulted in some of the most complicated iconography and technology in the history of North American ceramics.

**Giovas, Christina M. [150] see LeFebvre, Michelle J.**

**Girard, Michel [70] see Enloe, James G.**

**Girma, Minassis [107] see Brandt, Steven A.**

**Giron, Mario (CalState-LA)**

[93] *A Behavioral Interpretation of High Density Ceramic Sherd Concentrations at Midnight Terror Cave*

The initial survey and surface collection of half of Midnight Terror Cave uncovered the presence of a number of high density deposits of broken ceramics. All of the deposits were located in marginal areas along the cave wall and in other inaccessible spaces. The deposits consisted of an extremely heterogeneous mix of ceramic types none of which yielded a reconstructable vessel. The patterns noted suggest that the deposits reflect the deposition of material used in previous rituals that had been redeposited in preparation for the next use. Such behaviors have been described ethnographically as part of modern Maya ritual.

**Glaab, Rigden (Washington State University)**

[190] *Fusing Biological and Historical Continuums: The 2008 Field Season of The Tavaputs Archaeological Research Project*

The Tavaputs Plateau of Northeast-Central Utah contains evidence of Early Holocene hunter/gatherer occupation responding to the retraction of Late Pleistocene species (ca. 9000 B.P.). The Tavaputs Archaeological Research Project (TARP) is focused on studying the presence of Late Pleistocene/Early Holocene material culture as a proxy for explaining high altitude human land use across the American West. This paper will utilize human behavioral ecology and emphasize local social history to discuss lithic and paleo-environmental data sets obtained during the 2008 season.

**Glascocock, Michael D. (University of Missouri) [10]** see Schwarz, Danielle K. H.; [18] see Beck, Margaret E.; [49] see Coleman, Magen E.; [49] see Caffrey, Karen; [53] see Frashuer, Anya C.; [76] Discussant [92] see Gomez, Josue A.; [99] see Alex, Bridget A.; [130] see Rosania, Corinne N.; [130] see Conlee, Christina A.; [168] see Boulanger, Matthew T.

**Glazer, Dashiell (UNLV), Karen Harry (University of Nevada, Las Vegas)**

[77] *An experimental examination of Arctic soapstone cooking technology*

We examine soapstone's heat properties and its usefulness for Arctic cooking technologies in comparison to alternatives such as metal and ceramic. We focus on how energy storage properties enhance soapstone's usefulness, particularly with low-energy heating. We explore whether the historic discontinuation of traditional stone cookware was driven by availability of metal, trade pressures, or a change in heating systems, such as the adoption of stoves. We will conduct low-energy boiling experiments, simulating the oil-based heating of historic Arctic communities. By understanding heat absorption and release associated with various materials we will gain insights into the choices made by Arctic people.

**Glover, Jeffrey (Georgia State University), Dominique Rissolo (The Waitt Institute for Discovery), Fabio E. Amador (National Geographic Society) and Joseph Ball (San Diego State University)**

[133] *Vista Alegre Revisited: New Data on an Ancient Maya Port*

The Proyecto Costa Escondida completed its first season of preliminary test excavations at the ancient Maya port site of Vista Alegre. The inner-coastal island center is located on Laguna Yalahau of northern Quintana Roo. Our test excavation program has provided ceramic data sufficient to enable us to address site chronology. In addition, these data shed light on broader social, political, and economic issues associated with the Terminal Classic and Postclassic periods in the northern Maya Lowlands. In particular, ceramic and obsidian data allow us to discuss trade relations between Vista Alegre and other northern lowland sites such as Chichen Itza.

**Glowacki, Donna (University of Notre Dame), Gary Brown (National Park Service) and Paul Reed (Center for Desert Archaeology)**

[144] *Aztec Ruins and the Middle San Juan Region in the Post-Chacoan World*

The classic great houses at Salmon and Aztec were established as late 11th-century Chacoan colonies. During the mid-1100s, the Middle San Juan and surrounding regions experienced multidecadal drought and population decline. The local Chacoan style nevertheless continued to evolve, with construction of Chaco-style structures at Aztec into the 1200s. In contrast, other Middle San Juan communities saw increased aggregation and large villages with more typical San Juan architecture. We compare the Pueblo III component at Aztec and contemporaneous settlements throughout the Middle San Juan to contextualize Post-Chacoan developments and Aztec's role in this changing social landscape.

**Glowacki, Donna [18]** see Plis, Laura C.

**Goebel, Ted (Texas A&M University), Jim Wiederhold (Texas A&M University) and Michael R. Waters (Texas A&M University)**

[29] *The Fenn Clovis Cache: New Analyses of Artifact Form and Function*

Why did Clovis people cache artifacts? What can caches tell us about early Paleoindian behavior? To address these questions, we have undertaken an analysis of the Fenn Clovis Cache, 56 lithic tools from an unspecified locality in the Utah-Wyoming-Idaho tri-state area. We present new data on the (1) character and origin of tool-stones used to produce the artifacts (using geochemical techniques), (2) potential functions of the artifacts (using high-power and low-power microscopic approaches), and (3) technological and morphometric aspects of bifacial points and bifaces. With these results, we explore aspects of Clovis technological and settlement organization, as well as ritual/symbolism.

**Goebel, Ted [145]** see Graf, Kelly E.

**Goemaere, Eric [130]** see Golitko, Mark L.

**Goff, Sheila [13]** see Curewitz, Diane

**Gokee, Cameron (University of Michigan)**

[107] *Strategizing Social Identity in Historic Bundu*

Oral traditions and technological systems index social identities in very different ways, yet a shared potential for malleability gives them both strategic importance in the politics of identity. A comparative approach to these complementary strands of evidence may therefore reveal how people played upon words and material objects in their representations of identity. This paper develops such an approach to explore strategies of social identification in the ethnolinguistically diverse region of Bundu, a 17th-19th century Islamic polity located in the eastern Senegambia.

**Golden, Charles**

[169] *Just How Strong? Examining the Notion of Classic Maya States*

Robert Sharer was a relatively early proponent of the conjunctive approach to Maya studies, bridging history and archaeology to understand the micro- and macro-historical patterns of statecraft in the Maya area. One result of the conjunctive approach is the ongoing discussion of just how tightly integrated Maya states were politically, socially, and economically. This paper builds on work by Sharer and others in the eastern Maya area, as well research by the author and others in the Western Maya lowlands to provide an analysis of the integrating economic, cultural, and political structures of Classic period Maya kingdoms outside the Central Peten region.

[83] see Scherer, Andrew K.

**Goldstein, David (NSF-Universidad Peruano Cayetano Heredia)**

[170] *Late Intermediate Period Fuel Use in Sicán Production Contexts: Implications for Sustainable Use of Dry Tropical Forest Resources*

A considerable focus of the past thirty years of the Sicán Archaeological Project in the La Leche Valley of Northern Peru was the reconstruction of craft production and political economy in the region. In 1999 and 2001 the excavation of an artifact workshop, dedicated to producing ceramic and metalwork and associated with three domestic areas, permits a unique insight into the use of fuel resources and the potential impact of political economy on the regional environment. As the principal fuels used for both forms of production come from trees, and given that the local environment is best classed as a Dry Tropical Forest, the potential for overuse of arboreal resources was unprecedented. The investigation of fuel use at the site indicates that several variables, fuel reuse, garbage recycling as fuel, pastoralism, and seasonality all played significant roles in mitigating the potential for fuel overexploitation. The potential for this model of production to demonstrate a way forward for modern sustainable use and management of Dry Tropical Forest resources will be explored in this presentation. Of critical importance is to demonstrate that holistic models of ancient production and social organization can facilitate future directions in modern sustainable resource use, placing archaeology in the service of modern dialogues on sustainable resource use.

Goldstein, David [81] see Muñoz, Lizette A.; [185] see Hageman, Jon

Goldstein, Lynne (Michigan State University) [43] *Discussant*

**Goldstein, Paul (UC San Diego)**

[108] *Segmentary social organization and Andean State Expansion: Multiethnicity and Diasporic Migration in Tiwanaku (AD 600-1000)*

The development of the Tiwanaku state (AD 600-1000) is often interpreted according to a monolithic centralized state model derived from old world archaic and modern imperial precedents. New settlement pattern, household, and mortuary archaeology, and ethnographic parallels suggest a reappraisal of the socio-political organization of Tiwanaku. Diverse corporate social entities may be identified both within the altiplano core region and in Tiwanaku's lowland agropastoral colonies in the south central Andes. The enduring sociopolitical pluralism within the Tiwanaku homeland and colonies tempers some of our globalist assumptions about the predominant role of centralized institutions in archaic states.

[45] *Discussant* [12] *Discussant*; [81] see Plunger, Elizabeth; [81] see Muñoz, Lizette A.; [81] see Baitzel, Sarah I.

**Goldstein, Robin (Northwestern University)**

[45] *An Ideological Divide: Exploring the relationship between inhabitants of the Chuquibamba Valley and the Wari state*

During the Middle Horizon, the Chuquibamba Valley, located in the upper Majes-Camaná drainage (Arequipa), experienced a dramatic increase in agricultural production and population, accompanied by the construction of a small Wari compound. Although it is unclear whether the

non-Wari inhabitants of the valley were indigenous to Chuquibamba, excavations of domestic contexts have demonstrated they did not subscribe exclusively to Wari traditions. Preliminary investigations indicate they incorporated certain Wari tenets into an existing ideological system native to the region; although this population may have labored in conjunction with the Wari state, the ideological divide demonstrates a degree of autonomy exercised by inhabitants of the Chuquibamba Valley.

**Golitko, Mark (UIC), Dominique Bosquet (Institut Royal de Sciences Naturelles de Belgique), Eric Goemaere (Service géologique de Belgique), Ivan Jadin (Institut Royal de Sciences Naturelles de Belgique) and Lawrence Keeley (University of Illinois at Chicago)**  
[130] *Results of LA-ICP-MS analysis of Early Neolithic (LBK culture) Ceramics and Clay samples from the Hesbaye region of Belgium*

We report here on the results of Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry (LA-ICP-MS) analysis of early Neolithic (LBK) ceramics from five villages in the Belgian Hesbaye region. Comparison with the results of an intensive clay survey suggest differential patterns of pottery circulation in the region over time, with an increase in exchange during the later, more bellicose period of settlement, and evaluate Keeley and Cahen's theory that exchange in utilitarian goods was utilized as a means of maintaining intra-regional alliances.

**Golubiewski, Kristy [174]** see *Bovy, Kristine M.*

**Gomez, Enmanuel [4]** see *Kurin, Danielle S.*

**Gomez, Josue (University of Oregon), Barbara Voorhies (University of California Santa Barbara), Douglas J. Kennett (University of Oregon), Hector Neff (California State University Long Beach) and Michael D. Glascock (University of Missouri Research Reactor)**

[92] *Early Formative Interactions between the Soconusco and the Gulf Coast Olmecs*  
Excavations at the sites of Los Cerritos and EL Grillo provide a glimpse of Early Formative lifeways along the Soconusco coast. The ceramic assemblages recovered are consistent with the typology from the region; including fragments that appear to be imports from the Gulf Coast. Elemental composition via INAA was conducted on 222 sherds and 6 raw clay samples. Imported vessels from the Gulf Coast and Mazatan and local ceramic groups were identified, demonstrating close interactions with these two regions during the Early Formative Period.

**Gonzalez, Ana (University of Hawaii at Manoa)**

[191] *Predating the Pais Caranqui and Inka wars: A look at a Proto Cayambe-Caranqui community in Pambamarca 1100 B.P.*

Data from the site of Oroloma at Pambamarca, Ecuador suggests inhabitants were forced to leave when the Cayambe volcano exploded in 900 A.D. A typology of the Oroloma pottery was created to help develop an understanding of social organization during the Early Intermediate Period which predates the Pais Caranqui, a multi-ethnic conglomerate that united during the Inka wars. The earlier site lacks evidence of ritualized chicha drinking which has been noted to be notorious during highly politicized campaigns in the later periods and are known methods of displaying power and prestige.

**Gonzalez, Ana Lucia [191]** see *Gifford, Chad*; [162] see *Connell, Samuel V.*

**Gonzalez, Jason (SIU Carbondale)**

[68] *Understanding Classic Era Cultural and Landscape Change of Northwestern Belize: Methodological Concerns of Comparing Sites and Communities*

This project examines Classic Maya political and cultural relations between a subsidiary community, Ixno'ha, and a regional center, La Milpa. Previous research suggests that the political orientation shifted from one of dispersed communities; to a region dominated by La Milpa; to one of decentralization and heterogeneity of site planning, settlement, and landscape. I am assessing this reconstruction by comparing community landscapes defined by settlement patterns and sociocultural ties. However, differences in community sizes, excavation volumes, and evolving mapping techniques has meant the need to standardize ceramic data, develop common architectural categories, and simplify otherwise complex GIS constructed maps.

**Gonzalez, Sara (University of California, Berkeley)**

[174] *An Archaeology that Matters: Decolonizing Practices at Metini: Fort Ross*

The practice of decolonization provides an avenue for thinking about the political implications of

archaeological theory and methodology, transforming scholarship so that it benefits those whose heritage we appropriate in our research, while also helping us to situate ourselves within a disciplinary framework. Combined with Indigenous and feminist perspectives, decolonization provides an alternative vantage point from which to structure the theory, approach to and practice of an archaeology of colonialism. Applying these vantage points to the Kashaya Pomo Interpretive Trail at Metini:Fort Ross, this poster considers how decolonizing archaeology impacts the communities we engage and alters our vision of colonial subjects.

**González, Fernando (INAH)**

[19] *Constructive Systems and Architectural Elements Identified Inside the PAX Study Area and its Surroundings. A Stylistic Comparison*

Based on work done by the Xuenkal Archaeological Project (PAX), we can identify different architectural characteristics and systems that differ across the site as well as similarities across the occupied sequence, which lasts from the Late Preclassic to the Late Classic. There are two clear architectural forms in the site associated with a particular style and chronology: Puuc structures associated with Cehpech sphere ceramics from the Late Classic, and Sotuta platforms from the Terminal Classic. Similarly architecture surveyed between Xuenkal and Dzadz Naranja shows even more different types of architecture, for example megalithic architecture from the Early Classic; Cehpech and Sotuta architecture associated with Late and Terminal Classic, and also Postclassic structures. This work complements and enriches understandings of the context of the northeast Yucatan peninsula's regional differences in architecture and how it relates to over-reaching political differences.

**Gonzalez Heredia, Raymundo [133]** see *Folan, William J.*

**González López, Ángel [38]** see *Pereira, Gregory*

**González Ruibal, Alfredo [139]** see *Politis, Gustavo G*

**Good, Irene (Peabody Museum, Harvard U)**

[21] *The Raw and the Cooked? Modeling the Middle Asian Interaction Sphere and Ecologies of Exchange*

This paper examines themes of "Natural" vs. "Cultural". The first views natural vs. cultural landscapes in Middle Asia. Both played a significant role in exchange. The second theme explores small vs. large-scale views of Eurasian cultural systems. Scalar variation can be very informative, but do we give it attention? The third theme is of systemic vs. linear (historical) models of long-distance exchange. Are these approaches incompatible? A new model is proposed with insight drawn from economic activity from third millennium BC Middle Asia. By addressing heuristic discrepancies between analogic vs. homologous views, we can parse between raw and cooked.

**Goodale, Nathan (Hamilton College), Curtis Osterhoudt (Los Alamos National Lab), Ian Kuijt (University of Notre Dame), Lara Cueni (Hamilton College) and William Andrefsky (Washington State University)**

[44] *Cultural Transmission and the Production of Material Goods: A Neolithic Case Study of the Neutral Model and Identity in Notched Points*

The Identity in Notched Points Index (INPI) highlights the major morphological differences between notched points. The INPI, used in conjunction with pattern recognition clustering techniques has provided interesting results suggesting it may be possible to acknowledge small groups to single artisans. We believe this to be especially feasible when cultural transmission favors neutral behaviors. Utilizing a sample of notched points recovered from Neolithic sites in the Near East, we suggest that this technique can aid in a greater understanding of variation between material goods as well as the role of human behavior interacting with stone technologies.

[44] *First Chair*

**Goodale, Nathan [44]** see *Fontes, Lisa M.*; [44] see *Prentiss, Anna Marie*

**Goodby, Robert (FranklinPierce University)**

[153] *New Data on the Late Archaic in New Hampshire*

Late Archaic sites in Holderness and Swanzey, New Hampshire illustrate the complexity and dynamism of this time period. At the Swanzey Fish Dam site (27CH30), a stone dam in the Ashuelot River reflects economic intensification and a growing attachment to place at a location that was continuously occupied for as long as ten millennia. At the Davison Brook site in

Holderness (27GR201), temporally and spatially discrete occupations are used to reassess the arguments for separate, coexisting cultures during the Late Archaic, and the sudden abandonment of the site raises additional questions about cultural change during the Terminal Archaic/Woodland transition.

**Goodman-Elgar, Melissa (Washington State U.) and Louis Fortin (Washington State University)**

[175] *Geoarchaeological Assessment of floor variability in a Formative sunken court complex, Taraco Peninsula, Bolivia*

This study assessed variability in the composition of floor deposits from two Formative sunken court structures using a suite of bulk pedological analyses and soil micromorphology. The Taraco Archaeological Project revealed the two sunken courts in 2003 through a series of discontinuous test pits that followed internal stone walling to occupation surfaces. A variety of flooring deposits, including multiple flooring events, were visible in profile. Characterization of floor deposits enables a more nuanced reconstruction of the structures and the artifacts they contain. These floors add to studies of other Formative floors to further the understanding of Bolivian Formative construction practices.

[175] *First Chair*

**Goodman-Elgar, Melissa [175]** *see Dolan, Patrick*

**Goodmaster, Christopher (Geo-Marine, Inc.)**

[134] *Mapping at a Scale of One to One: The Implications of High Definition Documentation for Archaeological Sites and Artifacts via 3D Laser Scanning*

Recent advances in three-dimensional (3D) laser scanning hardware coupled with enhanced field and laboratory data collection techniques, the ability to process and manage large data files, and the capability of integrating these data across a variety of platforms have made this technology an effective and practical option for the documentation, analysis, archiving, curation, and dissemination of archaeological information. This paper explores the implications of 3D laser scanning with regard to archaeology, drawing upon a wide variety of case studies that underscore its utility and potentials.

**Goodsell, Joanne (UC Davis)**

[146] *Choris Revisited: New Demographic and Season-at-death Data for Choris Peninsula Prey*

Results from the analysis of faunal remains from three Choris Peninsula house structures, excavated by J. Louis Giddings in the 1950s, are reported. Specifically, demographic information for the two most abundant prey species -- ringed seal and caribou -- is presented. Determined through the assessment of long bone epiphyseal fusion rates and dental eruption and wear patterns, as well as through the evaluation of dental thin-sections of mandibular-tooth cementum annuli, these age and season-at-death data shed new light on the hunting practices and settlement patterns practiced at the type-site for the still poorly understood Choris culture (3000-2500 B.P.) of Northwest Alaska.

**Goodyear, Albert (SC Institute of Archaeology)**

[190] *The Allendale-Brier Creek (ABC) Clovis Complex of the Central Savannah River Valley*

The Allendale-Brier Creek (ABC) Clovis complex is a heuristic device for organizing the accumulated findings of Clovis artifacts and sites over the last 40 years in eastern Georgia and southern South Carolina. Relevant data are restricted thus far to lithic artifacts resulting from individual artifact mapping and by excavations at quarry-related sites. Chert quarries in Burke County, Georgia and Allendale County, South Carolina appear to be the focal point of settlement systems. Excavations at stratified sites such as Topper and Big Pine Tree are allowing secure identification of Clovis technology in this region of the Southeast.

**Goralski, Craig (Dept of Anthropology)**

[99] *Usulután Pottery Production and the Uapala Ceramic Sphere*

This paper discusses patterns of production and distribution of Usulután pottery through the use of Instrumental Neutron Activation Analysis (INAA) compositional data. Over three hundred samples from Late Formative period chiefdom-level sites in Honduras were subjected to INAA at the Smithsonian Institution and National Institute of Standards and Technology (NIST). These data were compared to their existing compositional database using established statistical methods. The results shed light on patterns of pottery production and distribution across the Uapala Ceramic Sphere, helping to define the political and economic behaviors that led to the broad similarities in ceramic assemblages seen throughout the sphere.

**Gordon, Bryan (Can. Museum Civilization)**

[109] *Dating Rock Art: A New Non-Invasive, Inexpensive Field Technique*

Small particles of paint or rock fall to the floor when an artist creates pictographs or petroglyphs. An archaeologist can date this art and floor by finding these particles associated with AMS-datable charcoal, needles, twigs or leaves sieved from 5mm levels in a 20x50 cm area vertically below the art. Web-downloadable Paint.Net and GIMP software are used to match colours in digital photos of the wall to the particles in each scraped layer.

**Gordon, Joel [134]** *see Sabom Bruchez, Margaret*

**Gorman, Elizabeth (University of New Brunswick Fredericton) and Susan Blair (University of New Brunswick)**

[9] *Augustine Mound, Northern Adena and the Woodland of the eastern North America.*

Mound-building and mortuary ceremonialism are significant aspects of the Woodland period of eastern North America, with the Adena complex representing an early manifestation of this tradition. Although Adena is strongly associated with the upper tributaries of the Mississippi, Adena manifestations occur in a broad arc to the north and east of this region. In this paper we explore the relationships among Adena and its affiliates, with particular reference to northern Adena sites, and, especially, the Augustine Mound of the Maritime Peninsula, Canada. We suggest that current perspectives significantly underestimate the variability and complexity of what has been called Adena.

**Gorman, Rebecca (University of Florida)**

[163] *De-Centering the Mission: Considering Indigenous Continuity and Change through Investigations at the Spanish Mission San Juan del Puerto (1587-1702), Fort George Island, Florida*

The mission San Juan del Puerto has been the subject of limited archaeological surveys and excavations conducted primarily in an effort to delineate the mission-period extent of the site on the landscape of Fort George Island. The current reconsideration of this site allocates a better understanding of the mission period occupation, but should not be considered as wholly separate from other indigenous sites on the island. De-centering the mission as the sole object of study to include the prehistoric and historic sites surrounding it allows for a better understanding of indigenous continuity and/or change through time in Northeast Florida.

[163] *First Chair*

**Gould, Richard (Brown University)**

[28] *Handling the Handoff: Seamless Transitioning from Field to Laboratory in Forensic Investigations*

The passage of evidence from the crime- or disaster-scene location to the laboratory for processing is essential for an orderly and credible courtroom presentation. No amount of careful analysis "down the line" can overcome deficiencies in field collecting and recording or failures to transmit the evidence adequately. Standard chain-of-custody procedures are a minimum requirement for this transition, but forensic archaeologists need to examine the assumptions that structure this critical phase of the investigation and be ready to expand these procedures.

**Graesch, Anthony (UCLA Dept of Anthropology), Catherine E. Bailey (UCLA) and David M. Schaepe (Sto:lo Research and Resource Management Centre)**

[162] *A Stone's Throw From The Border: Field Schools At The Near Far*

Field archaeology programs need not be located on distant continents in order for students to be exposed to unique, non-Western cultural frameworks and experiences. Drawing from field-program curricula in British Columbia, this paper explores how North American archaeology field schools can be total-immersion learning experiences. We discuss the pedagogical significance of (1) articulating indigenous oral histories and archaeological data in investigations addressing the long-term implications of colonialism, and (2) designing active learning environments via lectures, field trips, and ceremonies, with the goals of becoming functionally proficient in archaeological methodology and acquiring an understanding of and appreciation for other cultures.

**Graf, Kelly (Texas A&M University), Jessi Halligan (Texas A&M University), John (Texas A&M University), Ted Goebel (Texas A&M University) and Vaughn Bryant (Texas A&M University)**

[145] *Revisiting Owl Ridge, a Nenana-Complex Site in the Northern Foothills of the Alaska Range*  
During 2007 we resumed archaeological testing of the Owl Ridge site, located in the Teklanika

River valley of central Alaska. Original investigations of the site documented three stratigraphically distinct cultural layers, a Nenana-complex component (I) and two probable Denali-complex components (II and III), and thirteen 14C dates, ranging from 11,300-1,000 14C B.P. Our reasons for reinvestigating the site center on testing the hypothesis that the Nenana and Denali components represent historically and behaviorally distinct occupations of the region. In this poster we present preliminary geoarchaeological and paleoecological results from the 2007 season and discuss future objectives.

**Graves, William (Statistical Research, Inc.), Richard Ciolek-Torrello (Statistical Research, Inc.) and Robert Wegener (Statistical Research, Inc.)**

[10] *Hohokam Food Production and Social Relations at the Cashion Site Complex: Community and Subsistence Practices along the Salt River Floodplain during the Preclassic and Classic*  
The Hohokam use of the Salt River floodplain in the Phoenix Basin witnessed a long and complex history. Numerous excavations over the past 30 years have documented this history of changing settlement and subsistence practices. Changes in how people used and lived within the floodplain appear to correlate with larger scale changes in settlement location, community organization, and inter-community relations that took place during the Preclassic and Classic periods. Focusing on information from site AZ T:11:94 (ASM), part of the Cashion Site Complex, we explore possible relationships between changes in floodplain use and changes in community location, organization, and relations.

**Gray, Marlesa (Statistical Research, Inc)**

[43] *The Joint Courts Complex Project: An Overview and Context*

For the Joint Courts Complex project, Statistical Research, Inc. completely excavated a large, multi-component site in downtown Tucson, Arizona. The project, which included the excavation of a large historic cemetery, was run according to a strict schedule and faced enormous technological and logistical challenges. This presentation has three purposes: 1) to acquaint the audience with the project; 2) to detail some of the technological and logistical challenges that the project team had to overcome to successfully complete the fieldwork, analysis, and legal requirements on schedule; 3) and to introduce the remainder of the presentations in this symposium.

**Greaves, Russell (Peabody Museum, Harvard)**

[178] *Taphonomic views of tools: Ethnoarchaeological examination of technological activities in relation to other behaviors that form archaeological sites*

Understanding the relative importance of past behaviors inferred from the archaeological record, and determining what events occurred at those sites are basic analytic challenges. Despite advances in technological studies, there are few independent taphonomic controls on the presumed organizational significance of tool manufacture, maintenance, and use. Situating lithics, ceramics, and other well-preserved implements in relation to broader contexts of their integrated roles is crucial to extending their analytic utility. Longitudinal ethnoarchaeological data on Pumé foragers in Venezuela examine time budgets for technological and other activities. This study identifies frequencies, interrelationships, and potential archaeological signatures of those behaviors.

[178] *see Kramer, Karen L.*

**Greek, Marla [30] *see Owoic, Mary Ann***

**Green, Gary (University of Georgia) [120] *Discussant***

**Green, Ulrike (University of California San Diego) and Kirk E. Costion (University of Pittsburgh)**

[45] *Rethinking the Local Experience: Responses to Middle Horizon Expansion in the Andes*

Investigations of state-level political expansion in the Middle Horizon have provided a good understanding of the spreading of ideas and power from their main centers to the peripheries. These studies suggest different experiences in the affected territories ranging from direct intrusive colonial control to large group migration and indirect trade connections. However, most investigations present an external view of how the newcomers have influenced and reshaped the areas they entered. This paper attempts to evaluate our understanding how local populations viewed this influence and how local social, political, and economical networks responded to the influence of this political expansion

[45] *First Chair* [45] *Second Organizer*; [45] *see Costion, Kirk E.*



**Greene, Alan (University of Chicago) and Charles Hartley (University of Chicago)**

[183] *Renewing the 'Search for Structure': New Techniques and New Frameworks in Instrumental Ceramics Analysis*

In recent decades, many archaeologists and archaeometrists have moved away from studies of vessel form and decoration, turning instead to post-structuralist inspired investigations of ceramic technology. Work towards this end has focused on the production of compositionally-oriented datasets that make use of techniques developed in the physical sciences. In this paper we argue that while compositional data is important in the delineation of ancient ceramic traditions, investigations of ceramic structure are also essential to developing systematic understandings of pottery. We outline how techniques like computed tomography and x-ray diffraction can be marshaled to provide a significant and complementary perspective.

**Greene, Lance (UNC at Chapel Hill)**

[14] *Are You What You Eat? Redefining Race and Gender in a Post-Removal Cherokee Household*

During the Trail of Tears in 1838, roughly 400 Cherokees avoided Removal by hiding in the mountains of North Carolina. A wealthy couple, John Welch, a Cherokee man, and Betty Welch, a white woman, risked their lives by aiding them. After the Removal, the Welches provided land for many of them to reestablish a traditional town. An assemblage of dining-related artifacts and food remains from the Welch site, circa 1850, reveals the interdependence and community cohesion of the members of Welch's Town and their rejection of prevailing norms of race and gender at a tenuous moment in eastern Cherokee history.

**Greenlee, Diana (U of Louisiana - Monroe) [186] *Discussant*, [53] *see Page, Andrew J.***

**Greer, John (Greer Services) and Mavis Greer (Greer Services, Archeological Consulting)**

[67] *Log Structures in Caves and Rockshelters in the Northern Rockies*

Structures made of logs occur in open rockshelters, enclosed cave rooms, and deep caverns, with construction in both daylight and dark zone locations. Logs are small to large and were available near the site or required difficult transport from greater distances. Sites are at the bottom of prominent canyons or high on mountainsides. Some structures may have functioned as houses related to habitation, as temporary protection from weather, or for other activities such as game storage. Others, particularly in dark zone cavern passages and settings of difficult source acquisition, may be associated with ritual.

**Greer, John [109] *see Greer, Mavis***

**Greer, Mavis (Greer Services) and John Greer (Greer Services, Archeological Consulting)**

[109] *Bighorn Sheep in Montana and Wyoming Rock Art: Are they clues to cultural identity and migration?*

Bighorn sheep occur in rock art throughout the western United States, and the motif has been used to investigate cultural boundaries (e.g., Numic expansion) and prehistoric belief systems (e.g., rain shamanism). Motif reference may be actual or metaphorical, but referent and use in Montana and Wyoming seem different from California and other parts of the Great Basin, the primary distribution of such figures. Although the animal is present in mountain and plains in the northern region, its presence and importance are culturally minimized, perhaps related to cultural diversity due to the nomadic character of local tribes or groups passing through the region.

**Greer, Mavis [67] *see Greer, John***

**Gregg, Michael (University of Toronto), Edward Banning (University of Toronto) and Greg Slater (School of Geography and Earth Sciences, McMaster University)**

[183] *A reassessment of the use of stable carbon isotopes in categorizing organic residues surviving in early archaeological pottery from the Middle East and central Europe*

This paper presents isotopic evidence demonstrating that  $\delta^{13}\text{C}$  values used to identify animal fats in archaeological pottery from northern Europe have limited applicability in categorizing organic residues from early ceramic horizons in central Europe or the Middle East. Contradictory values have been observed in ruminant animals from northern and central Europe exclusively fed C3 forage grasses. The range of factors affecting isotope fractionation in fatty acid synthesis and preparation and storage of foods for human consumption will be presented in context of the emerging debate concerning the efficacy of isotopic data in characterizing organic residues embedded in archaeological pottery fragments.

Gregory, Hiram Ford [53] *see* Ermenwein, Eileen G.

**Grier, Colin, Kelly Derr (Washington State University) and Patrick Dolan (Washington State University)**

[85] *Managing Coastscapes: Long-term Processes of Settlement and Coastal Landform Development in the Gulf Islands of Southern British Columbia, Canada*

Pre-contact Northwest Coast peoples, despite their supposed "lack" of food production, engaged their environments in complex ways, intensifying many elements of their subsistence over the last 5 millennia. A long term view of this engagement requires considering not only how changing coastal landforms affected settlement strategies, but also how humans engaged and affected those coastscapes, ultimately producing a complex interaction system of land, sea and people. Recent research and data from cusate spit sites in the southern Gulf Islands of British Columbia, Canada illustrate these complex interactions and provide a basis for modeling socioeconomic complexity on the Northwest Coast.

Grier, Colin [175] *see* Derr, Kelly M.; [175] *see* Dolan, Patrick; [41] *see* Lukowski, Susan M.; [118] *see* Jordan, Leah G.

Griffin, Deanna [51] *see* Puckett, Heather R

Griffin, Robert [83] *see* Sever, Thomas

**Griffith, Cameron (Indiana University)**

[93] *Spatial Analysis of the Cavescape in the Macal Valley, Belize*

The subterranean setting is comprised of natural geological and speleological phenomena, whereas the cavescape, in the context of ancient Maya people who used caves, is a combination of this natural physical space and the culturally derived built environment. The focus of this paper is GIS data analysis conducted on cave sites in the Macal Valley designed to elucidate spatial patterns and their associated explanatory phenomena. Some of the transforms affecting the assemblages in these cave sites are the result of natural processes, whereas others are due to formalized and structured intentions related to both functional requirements and ritual practice.

Griffith, Kari [101] *see* Chiykowski, Tanya

**Griffiths, Weston (University of Nevada, Las Vegas) and John P. Staeck (College of DuPage)**

[123] *Status and Economy Among Non-Elites at Breclav-Pohansko, A Great Moravian Fortified Settlement from Southern Moravia*

An analysis of dietary habits of non-elite residents of the Great Moravian settlement of Breclav-Pohansko (800-900 C.E.), southern Moravia is presented. Faunal data from excavations of non-elite houses are compared with extant information on the diets of elites during this same period. Results indicate similar species were consumed by both elites and non-elites, though significant variation in the type and range of faunal elements recovered from different contexts reflect clear socioeconomic distinctions at the site. This variation has implications for intra-site economic patterns and may reflect redistributive behavior by elite heads of households to their dependants and kin.

Griffitts, Janet [174] *see* Morton, Ashley M.

**Grimstead, Deanna (University of Arizona)**

[66] *Spatial Patterns of Archaeofauna Procurement at Pueblo Bonito Chaco Canyon, New Mexico: Evidence from geographic ( $^{87}\text{Sr}/^{86}\text{Sr}$  ratios) and topographic ( $\delta^{18}\text{O}$ ) sourcing techniques.*

This paper asks if resource depression is evident at Chaco Canyon, New Mexico, by using tandem geographic archaeofaunal sourcing via  $^{87}\text{Sr}/^{86}\text{Sr}$  ratios and  $\delta^{18}\text{O}$  values to evaluate the presence of distant patch procurement during peak population within Chaco Canyon. Evolutionary ecological modeling and previous sourcing studies lead to the hypothesis that the archaeofauna should show evidence of non-local procurement consistent within decreased local availability. Sourcing results indicate non-local procurement for several faunal categories. The results from this paper suggest the degree of resource depression within Chaco Canyon was significant, forcing high energetic investment in non-local resource procurement.

[189] *see* Pavao-Zuckerman, Barnett; [164] *see* Dungan, Katherine A.

**Groff, Amanda (Un. of Central Florida)**

[99] *The Emergence of the Maya Tlaloc: A Late Classic Religious Icon*

This research project focuses on the iconographic representations of the Central Mexican god Tlaloc in the Maya region. It was during the Early Classic Period that Tlaloc transcended the boundaries of Central Mexico and was adopted into Maya ideology. During the Late Classic Period, a "Maya Tlaloc" was established and used to express ideologies depicting warfare and ritual activity. The adoption of Tlaloc imagery among the ancient Maya ultimately holds significant value to understanding Maya ideology and religion as well as facilitates an understanding of wide-scale interactions with Central Mexico.

**Grove, David (Univ of Florida)**

[149] *Regional Perspectives on the Olmec revisited*

"Regional Perspectives on the Olmec", edited by Robert Sharer and me, was published exactly twenty years ago. Has the book made a difference in understanding the dynamics of the Mesoamerican Formative period? This presentation comments upon the problems and debates within Olmec archaeology in 1989 that led to the book and then assesses our state of knowledge today. While the regional perspective approach has become widely adopted, old ideas and debates still linger. More significantly, we still lack a comprehensive view of the Formative period because too many regions of Mesoamerica remain poorly known.

**Grove, Matt (University of Oxford)**

[25] *A walk in the dust: reconstructing prehistoric mobility patterns from archaeological site distributions*

This paper draws an analogy between the modeling of particle movement by physicists and the reconstruction of human mobility by archaeologists. In the former case, movement is often simulated via random walks, the vertices of which can be eliminated so that one is left with a 'dust' of nodes. In the latter case, a dust of sites in the landscape is often very apparent; our task is the restoration of the vertices that once connected them. Using a novel simulation methodology parameterized with ethnographic data, this paper estimates specific movement patterns based on a number of archaeological site distributions.

**Grunden, Ramona [14] see Norris, Sean**

**Guderjan, Thomas**

[158] *The Role of Agriculture and Agricultural Lands in the Ancient Maya Landscape.*

This paper is an attempt to grapple with the scale and importance of ancient Maya agriculture in northwest Belize and adjoining portions of the Petén District of Guatemala. As an overview, the topography and archaeological landscape is briefly reviewed. Then, the site of Blue Creek in Belize is used as a case example of ancient topography and land use. Extrapolating from these data allow us to estimate the scales and importance of various agricultural and economic strategies. The discussion concludes by pointing to specific future research strategies and how they will further enhance our understanding.

**Gudino, Robert (Lassen National Forest)**

[29] *Geospatial Analysis of Rock Rings on the Lassen National Forest*

As of now a total of 265 rock rings have been recorded on the Eagle Lake Ranger District of the Lassen National Forest. These rock rings are not mentioned in any great detail in the Ethnographic literature, thus their precise function remains unclear. Most rock rings do not have any long-term habitation indicators such as midden or bedrock mortars. Using Geospatial analysis I will try to determine what common features of the rock rings and possibly start to develop a Geospatial predictive model.

**Gudiño, Alejandra [191] see Lippi, Ronald D.**

**Guerra Santander, Ericka [97] see Wernke, Steven A.**

**Guerrero, Emma (University of Notre Dame), Ian Kuijt (University of Notre Dame), Josep Anfruns (University Autònoma of Barcelona), Mark Schurr (University of Notre Dame) and Miquel Molist (University Autònoma of Barcelona)**

[145] *Disentangling social inequality: Human burials, fluorine dating, and household variation at Tell Halula (Syria)*

The study of Near Eastern Neolithic villages provides a unique means of tracing the emergence of social inequality. Unravelling these patterns, however, require a detailed understanding of the

chronological placement of individual burials, as well as the temporal relationship between construction events of houses. In this poster we present results of fluorine analysis to determine the phasing of individual households at Halula, and then incorporate these data into household and community scale models. This work illustrates a gradual increase in variation within household and community burial practices. We conclude with a discussion of the possible reasons for these practices.

**Guevara Mendoza, María Eugenia [110]** *see Charlton, Thomas H.*

**Guillen, Sonia, Agustin Rodríguez and Steve Knutson**

[67] *Up and Below: Cave Exploration and the Reconstruction of Cultural History in the Cloud Forest of Northeastern Peru*

Funerary use of caves in extremely inaccessible high cliffs is a typical pattern of the ancient Chachapoyas people (AD 800 into early Colonial times) in the cloud forest of northeastern Peru. There is a very little evidence for earlier periods. Underground caves have been receiving greater attention from different groups of speleologists in the last decade. Archaeologists from Centro Mallqui have been joining forces with Spanish and American speleologists. Results of these projects have documented intensive and long-term cultural use of caves in cliffs and underground locations for residential, funerary, and ritual use.

**Gullapalli, Praveena (Rhode Island College) and Teresa Raczek (University of New Hampshire)**

[39] *Complexity and Technology in South Asia and the Old World: The work and impact of Gregory L. Possehl*

This paper contextualizes the work of Gregory Possehl, focusing on his investigation of complexity and technology. His original research, compilation and synthesis of site reports and notations have led to a broader understanding of the Indus Civilization and complexity in the Old World. By contextualizing the Indus as a complex society without the necessary structures of the state, Possehl has refocused attention on key aspects of complexity, such as the various forms of technology. Contemporary research projects that have been influenced by and responded to Possehl's work range from examining traditions of complexity and monumentality to those of agriculture literacy.

[39] *First Chair* [39] *Second Organizer*

**Gunn, Christopher (University of Kentucky)**

[154] *Reassessing Puuc State Development in a Deep Chronological Context*

Explanations of the Puuc florescence have traditionally invoked migration and secondary state formation as key processes. These models often assume a short span of Puuc occupation that is confined to the Terminal Classic period (800-1000 AD). Excavations by the Bolonchén Regional Archaeological Project make this chronological assumption problematic since they demonstrate a continuous ceramic sequence, divided into six complexes, that begins in the Middle Preclassic period (ca. 800 BC). This paper compares the similarities and differences in the Bolonchén ceramic complexes to other contemporaneous ceramics in the Maya lowlands to critically examine these long-standing models of Puuc state formation.

[154] *Second Chair* [154] *Second Organizer*

**Gusick, Amy (University of California) and Loren Davis (Oregon State University)**

[47] *Mal de Mer no Mas: Discovery of an Underwater Site in the Sea of Cortez*

Recent research utilizing paleolandscape reconstruction and targeted underwater survey has yielded the discovery of a cultural deposit on the submerged landscape off of Isla Espiritu Santo, Baja California Sur. This discovery provides insight into the migration and subsistence patterns of paleocoastal peoples and challenges paradigms that present Baja California as uncomplicated and isolated from the rest of North America. Survey data identifying unique geomorphological and environmental characteristics clarifies the various factors that made this region attractive to early hunter-gatherer populations and also explains why Baja California may be integral in the search for the earliest inhabitants of the New World.

[47] *First Chair* [47] *Second Organizer*

**Gutbrod, Elyssa [53]** *see Whitley, Tamara K*

**Gutiérrez, María [130]** *see Luchsinger, Heidi M.*

**Gyucha, Attila [143]** *see Yerkes, Richard W.*

Haas, Jonathan [85] *see* Creamer, Winifred

**Haas, Wm. Randall (The University of Arizona), Claudia Rumold (UC, Santa Barbara), Mark S. Aldenderfer (The University of Arizona) and Nathan S. Craig (Penn State University)**

[30] *Late Archaic Tatora Processing in the Titicaca Basin: Evidence for Early Craft Specialization*  
Excavations at Jiskairumoko, an Archaic period site in the southwestern Lake Titicaca basin, Peru, discovered approximately 50 denticulate stone tools unique to the Rio Ilave drainage. Found in domestic contexts, these tools offer the possibility of revealing new insights about household economy during the sedentarization process. Employing starch grain, use-wear, and experimental performance analyses, we tested the hypothesis that the tools functioned as rasps to process totora (*Schoenoplectus californicus*), a "bulrush" still used for consumption and textile production throughout the region. Results support the interpretation that the early village's domestic economy included totora textile production using denticulate rasps.

[30] *Second Chair*

**Habicht-Mauche, Judith (UC-Santa Cruz)**

[168] *Studying Glaze-Paint Production and Exchange in the American Southwest Using Lead Isotope Analysis*

Over the last decade, researchers affiliated with the Ceramic Materials Laboratory at University of California, Santa Cruz have developed isotopic techniques for sourcing the lead ore used to produce glaze-painted pottery from late pre-contact and early colonial sites in the American Southwest. This paper provides an overview of our methods of analysis and summarizes our work to date on several related projects, emphasizing how these analyses have contributed to our overall understanding of the origin, production and exchange of glaze-painted pottery in the Rio Grande region of the American Southwest.

[13] *First Chair*

**Habicht-Mauche, Judith [13] *see* Cordell, Linda; [13] *see* Huntley, Deborah L.**

**Habu, Junko (University of California Berkeley)**

[94] *Modifying the Jomon Landscape: Chestnuts, Buckeyes and Subsistence Intensification*

As an example of affluent foraging economies, the Jomon data from the Japanese islands show ample evidence of subsistence intensification. In particular, scholars have pointed out the importance of nut collecting in Jomon economy. Scholars have also suggested that the cooling climate at around 4000 BP resulted in the decline of chestnut harvests and a shift in staple food from chestnuts to buckeyes. Rather than to assume the climate change to have been the dominant cause of long-term culture change, this paper examines the impact of multiple human activities on the Middle Jomon cultural landscape.

**Haecker, Charles (National Park Service) [171] *Second Chair* [171] *Second Organizer*; [171] *see* Mathers, Clay**

**Hageman, Jon (Northeastern Illinois U), David Goldstein (Universidad Peruana Cayetano Heredia), Erol Kavountzis (University of Florida), Rae Magnani (Northeastern Illinois University) and Robin Coleman (Northwestern University)**

[185] *Talking Trash: Ancient Maya Organic and Inorganic Refuse Disposal Patterns at Guijarral, Belize*

Though archaeologists have focused on ancient Maya houselots for decades, patterns and locations of organic and inorganic trash disposal are rarely mapped out and accurately described. We report on investigations at the Late Classic (CE 600-900) Maya rural houselot and ancestor shrine of Guijarral, where ceramic, phosphate, and pH assessments were obtained from a grid of some 180 shovel test pits. Results indicate overlap of organic and inorganic trash in some areas with discrete disposal patterns in others. These deposits demonstrate cultural preferences for resource use and disposal among Late Classic Maya bajo dwellers in the Northeastern Yucatan.

[185] *First Chair*

**Hakken, David [17] *see* Wells, Joshua J.**

**Halbirt, Carl [55] *see* Wallace, Antoinette B.**

**Haley, Bryan [69] *see* Watters, Margaret S.**

**Hall, John** [43] *see* Davis, Ivan W; [43] *see* Daughtrey, Cannon S.; [43] *see* McMahon, Catherine [188] *see* Hedden, John

**Hall, Thomas (DePauw University)**

[63] *Landscape Archaeology & World-Systems Analysis: Comparisons & Contrasts*

This paper explores the overlaps, differences, divergences, and convergences of Landscape Archaeology and World-Systems Analysis. It further seeks to contextualize the discussion in discussions of interregional interaction. One key issue is that often these various approaches talk past each other because all too often writers are not closely familiar with details of the other approaches. Thus, a goal of this paper is to facilitate such links. Furthermore, this has all too often led to archaeological analyses to miss opportunities to use their empirical results and theoretical discussions to the add to, emend, or revise world-systems analysis.

**Halligan, Jessi (Texas A&M University), C. Andrew Hemmings (Texas Archaeological Research Laboratory), and James Adovasio (Mercyhurst College)**

[89] *Preliminary geoarchaeological assessment of remote sensing data from the Inner Continental Shelf off the gulf coast of Florida*

Our search for submerged Pleistocene landforms and possible archaeological sites off the Florida Gulf coast utilized a combination of sub bottom profiling, side scan sonar, a ROV, video observation, and grab sampling. Highlights of our survey include documentation of several kilometers of a submerged river channel straddling the Clovis shoreline with numerous backfilled holes east of the Florida Middle Grounds. Further west, more than 100 infilled features were located (probably a combination of sinkholes and lagoons) that are invisible using surface topography alone. Also, nearshore sand bodies were identified just inside the LGM shoreline in over 100 meters of water.

**Halligan, Jessi** [89] *see* Hemmings, C. Andrew; [145] *see* Graf, Kelly E.

**Hally, David (University of Georgia)**

[142] *Late Woodland to Mississippian Vessel Assemblage Change as a Response to Changing Foodways*

The shift to intensive maize agriculture around A.D. 900 probably had a major impact on aboriginal food ways and domestic vessel assemblages in the Southeast. This paper describes the results of a systematic vessel form analysis of Late Woodland Swift Creek pottery collections from several sites in Georgia. The reconstructed Swift Creek vessel assemblage is then compared to Emergent Mississippian Woodstock, Early Mississippian Etowah, and Late Mississippian Lamar vessel assemblages in an effort to determine what impact intensive maize cultivation and utilization had on domestic pottery use.

**Halperin, Christina (University of Illinois)**

[112] *Affect and Effect: The Materiality of Maya Figural Imagery*

Maya curated and cached figural objects are frequently considered as non-human agents whose magical and supernatural essences complicated human/subject - material/object dichotomies. These capacities are linked with their mimetic properties in addition to their archaeological recovery in caches and burials. In drawing on recent materiality studies, this paper expands on the active role of curated or cached objects to consider other types of ancient Maya figural images, many of which were found in middens. In particular, attention is given to processes of animation through sensory cues (e.g. music, scent, color) and objectification processes between humans and the material world.

**Hamilton, Anne (University of Manitoba), Mostafa Fayek (University of Manitoba) and S. Brooke Milne (University of Manitoba)**

[168] *Palaeo-Eskimo Lithic Exploitation Strategies: Assessing Inferences of Culture Change Through Chert Sourcing on Southern Baffin Island*

Differential selection of lithic raw materials is thought to represent a marker of cultural change within the eastern Arctic Palaeo-Eskimo cultural continuum. However, few studies have used geochemical methods to evaluate this inference. On southern Baffin Island chert toolstone is highly variable thus presenting a complicated sourcing problem. In this paper, we present a combined methodological approach to source this chert and to evaluate if toolstone selection strategies changed over time. Our results indicate there are at least four distinct sources of chert in the interior of the island and that the Palaeo-Eskimo exploitation of them remained consistent for 2400-years.

**Hamilton, Marcus (University of New Mexico) and Briggs Buchanan (Simon Fraser University)**

[44] *Viewing cultural transmission as a diffusion process: Models, tests and implications*

The transmission of any information, either cultural or genetic, is inherently a stochastic process. Cultural transmission can be modeled by coupling a deterministic social learning rule with a stochastic error term, reflecting inherent copying errors during transmission events. Using simple mathematical models, we first explore long-term predictions of accumulated copying errors on archaeological variation through time. Second, we develop statistics that allow us to examine both the evolutionary mechanisms in observed rates of change in archaeological data through time, and the strength of learning biases involved. Third, we then test these predictions using Clovis projectile point data, and discuss the overall implications.

**Hamilton, Nathan (University of So. Maine)**

[30] *Reexamining Regional Patterns of Middle and Late Ceramic Period Perishable Impressions from Coastal Maine*

Perishable fiber impressions from Coastal Maine suggest regional technological patterns based on spin and twist. Analysis of ceramics from four large excavations, two by the R. S. Peabody Museum in Blue Hill Bay and two by University of Southern Maine in Casco Bay defined over 400 vessel lots. Digital photography was utilized to reconstruct perishables and tool forms. Selected vessels were examined with petrographic thin sections to determine manufacture sourcing. This study, supported by numerous radiocarbon dates, uses pattern analysis to refine the regional chronology.

[53] *see Taylor, Erin A.*

**Hammer, Emily (Harvard University) and Jason Ur (Harvard University)**

[16] *Nomadic Pastoralist Landscapes Along the Upper Tigris*

Although the role of nomadic pastoralists in Mesopotamia has been appreciated from a textual perspective, traditional extensive surveys focused on alluvial plains have failed to recover empirical data. The Hirbemerdon Tepe Survey, an intensive survey covering eroded uplands in Diyarbakir Province, Turkey, has recovered campsites, corrals, and cairns used over the past 2000 years. In this paper, we discuss what mapping of various campsites suggests about household and camp organization. A variety of associated water management and small-scale agricultural features show significant investment in the surrounding landscape and allow us to hypothesize about activities beyond the boundaries of the campsite.

**Hammerstedt, Scott (University of Oklahoma), Jennifer Myer and Mintcy Maxham**

[42] *Rural Settlement in the Black Warrior Valley*

Archaeological interpretations of rural settlement in the Black Warrior Valley have undergone several rounds of revision since the 1970s. In this paper, we synthesize survey and excavation data from University of Alabama and University of North Carolina projects that re-examine the nature of the Moundville settlement system. Site distributions, broad population trends, and implications on local political organization are discussed.

**Hammerstedt, Scott** [53] *see Regnier, Amanda L.*

**Hammond, Kate** [31] *see Chan, Rebecca C.*

**Hannus, L.**

[69] *Behind the Mask: Revealing The Face Of The Archeologist*

This talk presents the concept of Time Team America, a new television series being produced by Oregon Public Broadcasting. The series represents the format of the long running, extremely popular British production of Time Team. Five one-hour shows were filmed during the 2008 summer season that included three historic localities and two prehistoric sites. The historic sites include Fort Raleigh (The Lost colony); New Philadelphia, Fort James. The two prehistoric sites were Range Creek and Topper. Importantly, the format of public entertainment becomes a vehicle to promote the rich tapestry of educational merit that archaeology as a discipline represents.

**Hanowell, Benjamin (UW, Seattle; IPEM)**

[161] *Should I Stay or Should I Go? Lessons from Reproductive Skew Theory*

Reproductive skew theory is the branch of evolutionary ecology that analyzes the emergence and maintenance of reproductive inequality. I draw on this theory, and suggest how it may articulate with complex and cooperative kin systems, economies of scale, and emergent patron-client

regimes. Using Kennett et al.'s (2008) work on the Northern Channel Islands as an example, I discuss the limitations and opportunities for the theory in archaeology. I conclude that—while Kennett et al.'s work supports implicit skew model predictions of an ideal despotic distribution—support for explicit predictions regarding the interaction between relatedness and inequality require more fine-grained analyses.

**Hansell, Patricia (Temple University)**

[65] *Formative Dynamics in the Gran Coclé Region of Panama*

Settlement in the Gran Coclé region dramatically changes from the Early Ceramic Period (5000-2500 BP) to the Middle Ceramic Period (2500-1250 BP). The former is represented by widely dispersed sites ranging in size from 1/3 to 1 ha. Sites in the latter period mostly range from 1 to 10 ha but large agricultural villages begin to appear early in the sequence with the coastal site of La Mula-Sarigua being the earliest and largest recorded at ~ 60 ha. In this paper I discuss evidence for the production, consumption and distribution of specialized products at the site (and elsewhere) to assess its role as a central place in integrating the larger socio-economic community.

**Hansen, Gregory (Kennesaw State University), Brittany Burrell (Kennesaw State University), Randall Bach (Kennesaw State University), Terry Powis (Kennesaw State University) and Tiffany Streit (Kennesaw State University)**

[192] *A Middle Preclassic Maya Shell Workshop at Pacbitun, Belize*

Plaza zone excavations at the medium-sized Maya site of Pacbitun have revealed evidence of a Middle Preclassic (900-300 BC) shell workshop. The association of fourteen well-preserved structural foundations, household and workshop midden deposits and more than 3,000 pieces of marine shell ornaments and production byproducts suggest that this was a household level workshop. Preclassic workshops, especially those involving marine shell artifacts, are not well documented in the Maya Lowlands, thus Pacbitun provides a unique opportunity to study craft production at the household level during Middle Preclassic times. Comparative data from other regions of Mesoamerica are discussed.

**Hansen, Lorie [109] see Ashcraft, Scott**

**Hantman, Jeff (University of Virginia), Ashley Atkins (Pamunkey, William and Mary), Karenne Wood (Monacan, Virginia Humanities Foundation) and Martin Gallivan (William and Mary)**

[173] *Materiality and Immateriality of Indigenous Landscapes of Power in the Greater Chesapeake*

Archaeologists' interest in materiality aligns well with ongoing discussion between Indigenous and non-Indigenous anthropologists concerning visible constructions (e.g., mounds, ditches, artifact densities) and their associations with people and places of power. Increasingly in the greater Chesapeake region, we recognize that the immaterial, and low materiality, are critical aspects of powerful Native places. Integrating Indigenous conceptions of materiality (past and present), critical reading of ethnohistory and archaeological analysis, this paper examines two 'king's houses': the home of Chief Powhatan and the Monacan town of Monasukapanough. Such places embody a deep history of community construction and social negotiation whose significance overshadows the densities of objects present on the ground.

**Hardy, Maurice [70] see Enloe, James G.**

**Hargrave, Michael [53] see Ernenwein, Eileen G.**

**Harper, Cassandra (Florida Public Archaeology Network) [57] Discussant**

**Harris, Chandra (District of Columbia Historic Preservation Office) and Chandra Harris (District of Columbia Historic Preservation Office)**

[33] *Exploration of Magnetic Susceptibility at Hermosa Ranch: 2008 Field Season*

During the 2008 field season at Hermosa we undertook an exploration of magnetic susceptibility readings to clarify the type of information being recovered. We selected a suspected historic activity area for magnetic susceptibility testing and then chose three high and three low reading points in a north-south linear orientation for further investigation. We did metal detection (without collection) and a surface survey (with collection) within one meter to either side of this line. We then shovel tested each high and low point to define what caused the readings. This presentation compares and contrasts the results of these approaches.



**Harris, Chandra [33]** *see Harris, Chandra L*

**Harris, Doug (Narragansett Indian T. H. P. O. -- USET Inc.) and Robert Thrower (Poarch Band of Creek Indians -- United South & Eastern Tribes, Inc.)**

[173] *United South & Eastern Tribes Call For Acknowledgement & Preservation of Ancestral Ceremonial Stone Landscapes*

The remnants of the eastern American Indian ancestral tradition of using stones in prayer structures are often dismissed by archaeologists as colonial stone walls and farm clearing piles. These dismissals open the way for residential development of those pristine slopes, ridges and wetlands where the ancestral ceremonial stone landscapes abound. In resolution #2007:037, the United South and Eastern Tribes Inc. (25 federally recognized Indian Tribes from Maine to Texas), calls for federal departments to facilitate communication between tribes, archaeologists and SHPOs in order to cease these dismissals and open ceremonial stone landscapes to preservation eligibility. Resolution #2007:037 will be discussed.

**Harris, J.W.K. [3]** *see Dibble, Loretta J.*

**Harris, Oliver (Cambridge University)**

[177] *'Get three coffins ready...' Communal tensions, embodiment and the mediating role of violence in the British neolithic*

In this paper I will explore how violence emerged through the various affective tensions which were played out between the scales of particular bodies and broader communities during the British Neolithic. Archaeology has traditionally underplayed the role of emotion not only as a motivation for and consequence of violence but also as central to the ways in which communities forge a sense of identity. Through exploring this case-study the paper will argue that a consideration of the recursive relationship between community and the affective body is required if we are to understand how and why violence occurred in the past.

**Harris, Susan [91]** *see Fisher, Lynn E.*

**Harris, Suzanne**

[21] *Rojdi, the Indus Civilization and Beyond*

Prior to the 1980's excavations at Rojdi, the Harappan settlements in Gujarat were assumed to date from a later phase of Indus urbanization and the region itself was considered a frontier. What Rojdi gave us was a distinctly local and yet surprisingly early (2400 BC for Rojdi A) manifestation of Indus culture in this southern region. Gregory Possehl's research here began a trend of conceptualizing what remains of the Indus civilization in Gujarat as a synthesis of emergent Mature Harappan technology with the aesthetic choices and materials indicative of the indigenous peoples of Gujarat.

**Harrison-Buck, Eleanor (University of New Hampshire)**

[48] *Ritually Charged Rubbish?: Characterizing Terminal Deposits Associated with Site Abandonment in Maya Archaeology*

Material studies of Maya ritual practice in ethnoarchaeology suggest that objects entering archaeological contexts demarcate more than "sacred" and "profane;" the type of materials, the deposit style, and its location are socially meaningful choices. The ritual significance of material discard in the context of site abandonment is widely debated in Maya archaeology. Interpretations range from ceremonial feasting to ritual desecration, often resulting from warfare. An analysis of the content, composition, and context of terminal deposits, compared with ethnoarchaeological studies, explores the ways that individuals use material culture to inscribe social meaning to ritual practices and places in the built environment.

**Harry, Karen (University of Nevada-Las Vegas)**

[18] *Investigating the Causes of Long-Distance Pottery Trade between the Western Colorado Plateaus and Southern Nevada*

During the middle Pueblo II period, large quantities of ceramics were traded from the western Colorado Plateaus into southern Nevada. One of the traded ceramic types is Shivwits Ware, believed to have been produced on southern Shivwits Plateau. Previous studies indicate that nearly all of these traded wares were in the form of large, wide-mouthed jars, and functional analyses suggest that most were used for cooking purposes. In this poster we compare the thermal properties of Shivwits pottery with those of other locally-available wares, to explore the factors that may have contributed to the development of this trade.

[77] *see Glazer, Dashiell*

**Hart, John (New York State Museum)**[116] *Pots, Maize, and Longhouses: Thoughts on Northern Iroquoian Evolution*

The archetypical pre-European incursion complex societies of the Northeast are northern Iroquoian. The origination of the northern Iroquoians has been a topic of speculation among archaeologists for over a century. These speculations have focused on a small series of traits including pottery technology and decoration, maize-based agriculture, and longhouses. Recent empirical evidence has led to a dissociation of the histories of these traits and, therefore traditional ideas about northern Iroquoian evolution. These new histories coupled with new theoretical insights, informs our perceptions of complexity and its realization in the late prehistory of northern Iroquoia.

**Hart, Siobhan (Binghamton University) and Elizabeth Chilton (University of Massachusetts Amherst)**[116] *The Ebb and Flow of Change in Native New England during the 16th-17th Centuries*

Native American communities in early colonial New England experienced great change, social upheaval, displacement, and violence. However, archaeological interpretations have overemphasized transformations in technologies, settlements, economies, and social organization. Continuities in these dimensions of early colonial Native life have been masked by historical erasures and minimized in interpretations of the archaeological record. These factors make early colonial period sites and their pre-contact antecedents important datum points for understanding the nature of social complexity in Native societies during the 16th-17th centuries. Here, we examine two such sites in Deerfield, Massachusetts, as a mean to discuss the complex transformations in Native lifeways.

Hartley, Charles [183] *see Greene, Alan F.*Hawkins, Alicia [155] *see Banning, Edward B.***Hawkins, Megan (Texas A&M University)**[127] *Lithic Analysis At A Late Prehistoric Coastal Site In The Samoan*

The period between A.D. 300 and 1000 has been referred to as the "dark age" in Samoan prehistory due to a lack of archaeological data. More research is required to understand the shift in material culture that takes place around A.D. 300. Previous research on lithic production during this period has focused mainly on formal tool types and inter-island exchange. Through the analysis of debitage excavated from the coastal site of Fatumafuti, this paper seeks to add to that understanding as well as the presence and degree of craft specialization for inner island use.

Hawkins, Nancy (Louisiana Div of Arch) [186] *First Chair* [186] *Second Organizer***Hayashida, Frances (University of New Mexico)**[170] *The Proyecto Ynalche: Late Prehispanic Political Economy on the North Coast of Peru*

The Pampa de Chaparrí of northern Lambayeque was first occupied and farmed during Middle Sicán rule following the construction of the intervalley Racarumi or Ynalche canal. The results of four seasons of fieldwork by the Proyecto Ynalche are summarized, with an emphasis on changes in political economy and social organization following the conquest of the Sicán by the Chimú and Inka empires. Water management became increasingly centralized under imperial rule, accompanied by the dissolution of longstanding Sicán settlements and the transformation of local architecture and craft economies.

**Hayes, Katherine (University of Minnesota, Twin Cities)**[53] *Composition Studies and Optical Petrography Use for Tracking Changes in Ceramic Technology at Sylvester Manor*

Changes in style of locally-produced shell-tempered ceramics at the Shelter Island, New York site of Sylvester Manor were explored through composition studies and optical petrography. The aim was to assess potential contributions by enslaved Africans to traditional Native American ceramic practices. The results suggest changes based in the practice of mortar production and closer control of firing temperatures, skills closely associated with the enslaved Africans at the site.

Hayeur Smith, Michele [122] *see Smith, Michele Hayeur*; [122] *see Urban, Thomas M.*; [122] *see Smith, Kevin P.*

**Haynes, Gary (University of Nevada-Reno)**

[145] *Paintings and petroglyphs in the Bumbusi ridge rockshelters, northwestern Zimbabwe*  
Zimbabwe's thousands of rock-art sites contain almost exclusively polychrome paintings. A very few sites are known with animal-spoor petroglyphs; most are in Hwange National Park. During excavations at the sites in 2008, numerous painted shapes and animal outlines were also discovered alongside the carvings. Also, some spoor carvings had been painted in shades ranging from dark red to a very light grey-blue. This presentation describes and illustrates examples of the art, identifies the proportions of different animal species represented by hoofprints, offers a few interpretations, summarizes results of the excavations, and provides descriptive statistics for the sites.

[77] see Krasinski, Kathryn

**Hays, Maureen [140]** see Pyszka, Kimberly

**Hays-Gilpin, Kelley (Northern Arizona Univ) and Christine VanPool (University of Missouri)**

[112] *Red Earth, White Clouds: The Metaphorical World of Kayenta Pottery*  
Why did Kayenta potters of northern Arizona make whiteware jars and redware bowls in the 12th and 13th centuries? We propose that potters mastered two contrasting technologies as an expression of alternating complementary dualities that structured the Pueblo world then and now. In Kayenta times, pottery vessels served as metaphorical bodies that were appropriately "clothed" with painted designs to reiterate contrasts between earth and sky/clouds, corn and cotton, and women's and men's ritual responsibilities. So clothed, pots might have become metaphorical persons.

**Hays-Gilpin, Kelley [13]** see Gilpin, Dennis

**Hayward, Michele (Panamerican Consultants), Frank Schieppati (Panamerican Consultants), Michael A. Cinquino (Panamerican Consultants) and Peter G. Roe (University of Delaware)**

[109] *Rock Art and Modern Caribbean Cultural Identity*

The not-uncommonly heard words "nuestros indios" (our Indians) belie not only modern Caribbean society's proprietary interest in prehistoric cultures, but also reflect a key element in the ethnic identity of Puerto Rico and the Dominican Republic. At issue is how these current societies form their identities vis-a-vis themselves and outside groups. Spanish, African, Amerindian and North American cultural backgrounds are available for the formation process. A study of the area's prehistoric rock art and present artisan traditions is one means to view this process whereby the native past is incorporated into their cultural identities. In effect, the native past symbolic images carved into stone "crossover" a time boundary and become part of the symbols of the new island societies.

**Heald, Susan [118]** see Solazzo, Caroline

**Hearth, Nicholas (University of California-Riverside)**

[102] *Flake Core Technology during the Late Classic Period (AD 600-800) at the Ancient Maya Site of Chan, Western Belize*

Chan was an ancient Maya farming community where flake core technology primarily consisted of chert cores with a single-platform and flakes removed in a single direction. During the Late Classic, this flake core configuration predominated regardless of stone quality or household wealth. These are variables which have been argued elsewhere to be determinates of core configuration and reduction strategies. Alternative explanations are necessary to account for the similarity in observed cores. Ongoing debitage analysis is consistent with preformed flake cores being imported from outside the household. Likely, the form of imported cores determined ensuing flake core reduction at Chan.

**Heath, Barbara (UTK)**

[140] *Colonial Expansion on the Chesapeake Frontier: A Reassessment of Newman's Neck Plantation*

Newman's Neck, a small plantation on Virginia's Northern Neck, was occupied from the 1650s to the 1740s. The site's earliest phases represent colonial expansion inland along Virginia's waterways. Indentured, enslaved, and free labor combined in an agricultural economy to create a multi-ethnic community and transform the frontier. This paper considers the material evidence of this transition through architecture, landscape, and portable material culture. It also demonstrates the utility of reassessing collections from salvage sites in light of new frontier models.

[140] *First Chair*

Heaton, Ashley [60] *see Nelson, Katherine*

**Heberling, Natalie (University of New Mexico)**

[53] *GIS in the Study of Prehistoric Road Systems: A Combination of Methods*

Combinations of GIS methods may be helpful in identification of prehistoric roads or trail systems that cannot be located with traditional methods. The purpose of this study is to develop and test a comprehensive methodology for predictive modeling of ancient road locations. Multiple methods (remote sensing, line-of-site, and least cost analysis) are tested on three known prehistoric road segments that cross the Manzanos Mountains of New Mexico. The resulting methodology can be applied to understudied locations in an attempt to identify unknown roads allowing for a better understanding of the relationships between settlements.

**Heckenberger, Michael (University of Florida)**

[106] *Bounty from the River Sea: Aquatic Adaptations in South America as Seen from Amazonia*

South American archaeology provides many critical world examples of human adaptations to maritime and river environments. These adaptations were prominent in Andean, Circum-Caribbean and Amazonian settings. This paper considers the importance of fishing and riverine orientations in the economies of settled populations in Amazonia. It considers how fishing provides an important staple and how the wetland modification and management were critical to the development and organization of complex societies in the region. Features of these societies and aquatic adaptations in Amazonia are compared to other areas of South America, such as early complex societies of coastal Peru.

**Heckman, Robert (Statistical Research, Inc.) and Eleanor Dahlin (Statistical Research)**

[75] *Mesilla Phase Ceramics: From Multi-use Vessels to an Increasingly Specialized Ceramic Container Technology*

Excavation of an early Mesilla phase (circa A.D. 600 to A.D. 900) site resulted in the collection of thousands of sherds from a residential habitation located on an alluvial fan emanating from the eastern flanks of Organ Mountains in southern New Mexico. This collection allowed a detailed examination of the ceramic container technology of forager-farmers during this period in southern New Mexico. Our preliminary findings concerning vessel manufacture and function are compared to previous studies at sites in the Tularosa valley, along with a cross-cultural comparison with proto-historic and historic forager-farmer groups. The results shed light on the transition from multi-use vessels to an increasingly specialized ceramic container technology.

**Hedden, John (The University of Iowa), Cindy Nagel (Tallgrass Historians), John Hall (The University of Iowa) and Lynn Alex (The University of Iowa)**

[188] *471 Miles of Outreach: Iowa Archaeology on the Road*

The University of Iowa Office of the State Archaeologist (OSA) conducted a week-long, public outreach event in several communities along the route of the Des Moines Register's Annual Great Bike Ride Across Iowa (RAGBRAI) from July 19–26, 2008. RAGBRAI is an immensely successful annual activity that draws thousands of people from Iowa, across the nation and even internationally in a statewide event with tremendous public appeal and exposure. The OSA used RAGBRAI as a vehicle for educating the general public about Iowa archaeology and early Native American history. This event highlighted the local archaeological resources along the RAGBRAI route and infused Iowans, and their out of state guests, with information about the cultural heritage of the towns, communities, and landscapes at each overnight stop. Iowa Archaeology on the Road, a traveling public outreach program, was part of Iowa Archaeology Month 2008, OSA's premier outreach event. Created by the OSA in 1993 to encourage public participation in the awareness, understanding, and protection of Iowa's nonrenewable archaeological heritage, Iowa Archaeology Month represents one of the most successful examples of an outreach effort between a university unit and large, out-of-school audiences.

Hedgepeth, Jessica [99] *see Whittington, Stephen L.*

**Hedman, Kristin (ITARP-UIUC) and Dale Hutchinson (University of North Carolina-Chapel Hill)**

[82] *Natives and Newcomers: Bioarchaeological Approaches to Consequences of Contact*

The arrival of Europeans in North America inaugurated massive changes for native societies. Biological changes were linked both to numerous cultural, economic, and environmental changes introduced by the European colonial process and by native responses to these ever-shifting conditions. In this paper we explore some of the repercussions of the colonial process on the health of native populations in the eastern United States.

**Hedquist, Saul (SWCA Environmental Consultants, Inc.)**

[180] *Exotic Commodities, Social Complexity, and Community Organization: Evidence Supporting a Prehistoric Hierarchical Arrangement among Northern Sinagua Sites near Flagstaff, Arizona*  
The development of social complexity often involves restricted access to materials, resources, and social position. To address the problem of Northern Sinagua social complexity, I test for differential access to material goods by analyzing the quantity and distribution of exotic commodities (shell, copper, macaws, pigments, and turquoise) recovered from 14 Northern Sinagua sites dating between A.D. 1065 and 1250. The spatial distribution evidences a predominantly restricted flow of exotic commodities concentrated among primary sites (containing open air ball courts, plazas, or terraces). Accordingly, I interpret these sites as social or ceremonial centers, accommodating community, and perhaps regionally, integrative activities.

**Hefner, Joe (Statistical Research Inc.) and Kristin Sewell (Statistical Research Inc.)**

[43] *A Multidisciplinary Approach for the Determination of Cultural Affinity: Incorporating Contextual, Osteological, and Historical Documentation*  
Historically, typological classification has been a key strategy to identify group affiliation from the archaeological record, but this method does not consider how a group defines itself nor the admixture of multiple groups. Assessing affinity is often difficult since no simple correspondence exists between one's biological ancestry and one's culture. This is especially true in the context of 19th century Tucson, where the majority of the population shared a Hispanic culture and diverse Native American and Euroamerican roots. This paper presents a multidisciplinary approach to assess cultural affinity, with emphasis on multiple lines of historical, contextual, and osteological evidence.

**Hegberg, Erin (University of New Mexico)**

[18] *Characterizing Hispanic Ceramics in Historic New Mexico: Formation Methods and Firing Techniques*

The relationship of Hispanic ceramics to emerging Hispano-American identity in 18th and 19th century New Mexico is poorly understood. Ethnic fluidity suggests that decorative style is not a useful indicator of identity in historic New Mexico. This preliminary study used x-ray imaging and refiring analysis to examine non-visible differences in "Hispanic" and "Pueblo" technological styles. Neither analysis suggested variation indicative of distinct identities. This ambiguity may be due to small sample size. Further study with larger samples and better cultural context may clarify technological and cultural decisions behind Hispanic pottery and help delineate the ethnic environment of this period.

**Hegmon, Michelle (Arizona State University)**

[1] *Crossing Spatial-Temporal Scales, Expanding Social Theory*

Archaeology works at multiple spatial (household to site to region) and temporal (generational to epochal) scales. This multi-scalar work provides theoretical insights about the relationships between scale and social or evolutionary processes, including the roles of human agency, intentionality, and perception. While humans perceive and intentionally act at fairly small scales, their agency and the effects of their actions have reverberations at much larger scales. This crossing of scales has implications for myriad theoretical approaches, ranging from the Resilience framework to Annales cycles. These implications are explored by drawing from a multi-case comparison from the US Southwest.

[1] *First Chair* [1] *Third Organizer*

**Heilen, Michael (Statistical Research, Inc)**

[43] *Life and Death in Tucson, Circa 1854 to 1884*

Dramatic social, economic, and demographic change occurred in the American Southwest while Tucson's National Cemetery was in use. These changes had a pronounced effect on daily life and ultimately, on the composition of cemeteries. In Tucson, Arizona the mostly Hispanic local community re-organized as political and economic conditions changed and people from many different backgrounds moved into town. For this paper, I use census records, burial records, and other historical information to model who was likely buried in the cemetery and to discuss hazards faced by different segments of the burial population.

[43] *First Chair*

**Heilen, Michael** [43] *see Daughtrey, Cannon S.;* [43] *see Spurr, Kimberly*

**Heinsch, MF (University of Chicago)**

[74] *Production Frontiers: emulation and migration during the Kura-Araxes period in the Eastern Caucasus.*

Migration is a phenomenon of perennial concern to archaeologists in general, and for those working in Eurasia in particular. Recent noteworthy contributions to the investigation of prehistoric migrations in Eurasia echo well-worn assertions that shifts in the geographic distribution of certain persistent and enduring material types reflect cohesive linguistic and cultural groups and their movements. However, new investigations into production patterns associated with another persistent and enduring material type known as Kura-Araxes ware present evidence both for emulation and migration and pose challenges to existing models of migration while complicating the way identity, frontiers and migration are considered.

**Heitman, Carrie (University of Virginia)**

[66] *Monumental Buildings and Vernacular Architecture: Reassessing Hierarchy through Symbolic Dimensions of Chacoan House Construction*

Over the last century, much has been written about the diversity of Chacoan great houses and small houses that comprised this prehistoric social landscape during the ninth-twelfth centuries A.D. Using data from the Chaco Digital Initiative analytical database as well as other published sources, I test the applicability of a house society model and summarize my findings from ten settlements. Using archaeological as well as ethnographic data, this paper argues that there is still more to learn about the complexity of social relations during this time period by paying attention to architectural vernacular, Chacoan geomancy, and the contexts of unique objects. [66] see Geib, Phil R.

**Hemmings, C. (Texas Archeological Research Lab- Univ. of Texas), Ashley Lemke (University of Michigan), C. Andrew Hemmings (Texas Archeological Research Laboratory, University of Texas), J. M. Adovasio (Mercyhurst College) and Jessi Halligan (Texas A & M University)**

[89] *Not fit for man nor beast: The inundated continental shelf and the modern coastal distribution of Paleoindian and proboscidean remains in North America*

Remains of Terminal Pleistocene fauna and early humans on the modern coastal rim of the Gulf of Mexico and the Atlantic seaboard are summarized. These show the inland concentrations of people and animals at the end of the Pleistocene. Further, scattered nearshore and offshore finds are known along this entire coast. These data can hopefully be used for successful prediction of adjacent offshore underwater concentrations of Paleoindian and paleontological sites. As more inundated sites are directly examined, patterns and differences in Pleistocene land-use should be identifiable. Directions for future research are discussed and a request for additional data is solicited.

**Hemmings, C. Andrew** [89] see Halligan, Jessi J.; [125] see Porter, Kevin M.; [89] see Hemmings, C. Andrew; [190] see Adovasio, James M.

**Henderson, A (Kentucky Archaeological Survey) and David Pollack (Kentucky Archaeological Survey/University of Kentucky)**

[23] *Late Fort Ancient/Protohistoric Rockshelter Occupation in the Red River Gorge Region of Eastern Kentucky*

Post-A.D. 1550 Fort Ancient components have been documented at several rockshelters in the Red River drainage in Eastern Kentucky. Undoubtedly, some represent the winter hunting camps of households that resided at large villages in nearby central Kentucky. However, the recovery of very large ceramic jars and shell gorgets from some of these sites suggests an alternative explanation. Some of these components may represent residential sites occupied for perhaps one to five years. The fissioning of large villages may have lead to the relocation of households to these dispersed settlements.

**Hendon, Julia (Gettysburg College)**

[117] *Local Interactions and Long Distance Connections in the Ulua Valley: The View from Cerro Palenque*

Cerro Palenque is a major settlement in the Ulua valley, Honduras, that reaches its maximum occupation in the Terminal Classic period (AD 850-1000). Recent excavations in a large residential area near the ballcourt complement earlier research on domestic areas and monumental architecture. Analysis of obsidian at the site sheds light on long distance connections between Cerro Palenque and other parts of Mesoamerica. Study of ceramics and figurines speaks to the importance of relations among settlements in the lower Ulua valley and

other parts of Honduras. These insights are discussed in the context of daily and ritual life at Cerro Palenque.

**Henrickson, Celeste**

[47] *Archaeological Investigations in the Guaycura region of Baja California Sur, Mexico*

Little is known about the peoples of south-central Baja California Sur, Mexico, also known as the Guaycura. Early explorer and missionary accounts suggest that the Guaycura were highly mobile with a simple social and material life. However, there is little data to corroborate these historic interpretations. In this paper I present preliminary analysis of the first regional systematic excavations, conducted at Cueva Santa Rita, which suggest that the Guaycura were more culturally sophisticated than historically presented.

[47] see Shackley, M Steven

**Hepp, Guy (University of Colorado)**

[92] *Iconographic Ceramic Artifacts of Oaxaca's Formative Period*

Oaxaca's Formative period population represented concerns of their sociopolitical and spiritual lives in ceramic figurines, leaving a record for archaeologists interested in sociality. While most research in Oaxaca has been focused on the highlands, the area is actually diverse, with productive archaeology along the coast, the Isthmus of Tehuantepec, and in the Mixteca Baja. This paper will discuss artifacts from multiple areas of Oaxaca to highlight commonalities and regional differences in a part of Mesoamerica too long considered archaeologically homogenous. It will also provide some interpretations regarding aspects of daily life during the Formative period as accessible through figurine analysis.

**Herbst, George (UC Santa Barbara) and Stuart Smith (University of California, Santa Barbara)**

[78] *Iron and Stone: social meaning found through the juxtaposition of grave goods from a Napatan warrior burial*

This paper focuses on the significance of grave goods associated with a Napatan warrior burial located at the Nile Third Cataract. The presence of iron weapons highlights the importance of this burial both in terms of what it signifies about the individual's status and the accessibility of this relatively exotic material. However, what is also striking about it is the concurrence of more traditional, seemingly mundane lithic items along side these exotic ones. This contrast provides a basis from which archaeological inferences can be made regarding the relative importance of the individual objects and the social meaning they carried.

**Heredia Espinoza, Verenice (El Colegio de Michoacan)**

[132] *Adventures in blue agave: state formation in the central valleys of Jalisco*

The rise of the first states in Mesoamerica has long been a key issue in our discipline. Traditionally, archaeologists have been concerned mostly with dating such polities and identifying the earliest and "parent" civilization. Recently, archaeologists have become increasingly focused on the internal political structures, social processes, and long-term impacts (or legacies). In this paper, I contribute to this growing area of investigation by examining the nature of the Teuchitlan state that emerged during the Terminal Formative using regional survey data collected north of the Tequila volcano in the state's immediate hinterland.

Heredia Espinoza, Verenice [24] see Fargher, Lane F.

**Herhahn, Cynthia (University of New Mexico), Christopher Turnbow (University of New Mexico) and F. Scott Worman (University of New Mexico)**

[174] *Back to Elementary School: Finding evidence of Protohistoric Alameda Pueblo in an Albuquerque, New Mexico Playground*

LA 421, the probable site of Alameda Pueblo mentioned in Spanish documents from Coronado's entrada, the Pueblo Revolt, and Otermin's unsuccessful reconquest of 1681, lies underneath an Albuquerque elementary school. Excavations and monitoring by OCA-UNM at the site have resulted in deep vertical and broad horizontal exposure of archaeological deposits and features. These excavations give a rare picture of how the immediate area outside the pueblo structure was used, the cycling of occupational episodes and flood events, and provide insight into the behavior of the Rio Grande and the geomorphology and environment of the floodplain during the late Prehistoric period.

Herhahn, Cynthia [13] see Schleher, Kari L.; [13] see Blinman, Eric

**Herman, Rhett [145]** *see Boyd, Charles C.*

**Hernandez, Ivan [38]** *see Sugiyama, Saburo*

**Hernández Arana, Jonathan [92]** *see Donner, Natalia R.*

**Hernando Gonzalo, Almudena [139]** *see Politis, Gustavo G*

**Herr, Sarah (Desert Archaeology, Inc.) and Chris Dore (Metcalf Archaeological Consultants, Inc.)**

[88] *Measuring CRM*

The scale of cultural resource management practiced in the private sector has been notoriously difficult to quantify despite surveys, examinations of membership rolls, oral histories, and statistical projections. Furthermore, the United States government does not track the industry. Quantifying individuals, firms, and dollars spent is critical to understanding the political clout of cultural resource management practitioners, job availability for graduates, training needs for colleges and universities, and for understanding what portion of the profession membership organizations represent. This poster provides one summary of what we know about the profession and examines how we measure CRM in the United States.

**Herrera, Roberto (University of New Mexico)**

[65] *Re-evaluating social ceremonial centers and community in the Diquis: Initial findings from the site of El Cholo, Upper General Valley, Southern Costa Rica.*

Questions into what constitutes community in the Intermediate Area remain an evolving topic of study. Ongoing investigations at the site of El Cholo in the Upper General Valley of Southern Costa Rica offer new data suggesting a multi-community hypothesis reframing previous interpretations for exclusive elite occupation. Data from El Cholo initially suggest that activities at the site were more accessible to the common population than previously thought. Rather than elite centers, causewayed platform mound sites such as El Cholo may be areas where various groups participated in socially cohesive funerary and commensal activities.

**Herrmann, Nicholas (University of Tennessee), Jan Simek (University of Tennessee), Sarah Sherwood (Sewanee - The University) and Sarah A. Blankenship (University of Tennessee)**

[84] *Sacred Landscapes of the Southeast: Prehistoric Rock and Cave Art in Tennessee*

Over the past two decades, more than 50 dark zone cave art sites and nearly 40 open air rock art sites have been discovered in Tennessee. These sites collectively share certain specific geographic characteristics, suggesting that they comprise segments of a large ceremonial landscape. Relevant variables in both cave and open contexts include landform association, elevation, orientation, and color symbolism. The inferred ceremonial landscape described by this "monumental art" expresses fundamental aspects of prehistoric cosmological beliefs in the region known from other artistic contexts and in ethnography.

**Herrmann, Nicholas P. [53]** *see Yerka, Stephen J.*

**Herrmann, Nico [138]** *see Dambeck, Rainer*

**Hesp, Patrick [26]** *see Evans, Amanda M.*

**Hester, Thomas (Prof. of Anthropology, Emeritus)**

[157] *Plundering the Past: Backhoes, Big Screens, and Pay-Digs in the central Texas area*

As the commercial exploitation of archaeology grows, sites (and indeed, large properties) are being leased from landowners, and destroyed through pay-dig operations. This is not new in the central Texas area, but the practice has greatly accelerated in the last few years. Major sites along river systems in the southwestern Edwards Plateau are being eliminated by backhoes, with "pay dig" participants (at \$100-150/day) plucking the artifacts from massive screens! The pay-dig locales are well advertised on the internet and stories about some of them are being published in major newspapers as examples of "archaeology."

**Hickey, Elizabeth (Paleo Research Institute)**

[176] *Subsistence at O'Neill Crater*

Between A.D. 1060 and A.D. 1275 northern Arizona experienced climatic fluctuations resulting in shifting subsistence patterns for the Northern Sinagua. Recently analyzed macrobotanical data from a site on the slope of O'Neill Crater is compared with previously analyzed data from a site



below the crater dated roughly to the abandonment of the area. The Sinagua abandonment of the region has been attributed to climatic degradation. By comparing two data sets at neighboring sites from consecutive time periods we gain a deeper understanding about the stress experienced by the Sinagua people and the interaction between climate and prehistoric agricultural conditions.

**Hicks, Frederic (University of Louisville)**

[166] *Governing Smaller Communities in Aztec Mexico*

The administration of smaller, subordinate indigenous communities in sixteenth-century central Mexico is reconstructed, using mainly early censuses and related documentary material. We can see a hierarchy from the households to the local headmen, who administered tribute collection, land allocation, and labor mobilization for the higher authorities, and the composition of segments of the polity governed by a king (tlatoani). The terminology used for the governors and the segments they governed varies considerably from place to place, but we can see a general pattern common to the whole region. However, the Tenochca conquest introduced some changes in the Valley of Mexico.

**Hiebert, Fred (National Geographic Society)**

[21] *The Middle Asian Interaction Sphere and the Central Asian desert frontier*

In 2002, Greg Possehl coined the term "Middle Asian interaction sphere (MAIS)," re-casting the framework of cultural interaction in the 3rd and 2nd millennium from the Mediterranean Sea to the Persian Gulf. Possehl identified interaction through small rarified objects from the Indus – stamp seals, beads, ivory objects, and objects made of sea shell. Exotic in their find context, these finds indicate exchange over a vast area where early centers of urbanization were located and stretches of rugged desert and mountains intervene. This paper offers a perspective on this interaction from the northern frontier in Central Asia – a critical part of MAIS.

**Higueras, Alvaro (American University Rome)**

[106] *James B. Richardson and Peruvian archaeology: Five Decades of a Diverse and Rich Relationship*

I wish to narrate here the essential contributions James B. Richardson has made for the archaeology of the Central Andes. From early on I was intrigued by the breadth of his interests. Indeed, Jim's studies spanned from the Stone Age to the first Colonial settlements of the Piura region. His engagement went from the North Coast to the Moquegua valley on the Southern Coast. The exploration of the coast focused on beach ridges and its relation to periods of climate change. Jim shed an important influence in the research of Andean, American and world societies, and on indebted students like me.

[106] *Second Chair* [106] *Second Organizer*

**Hildebrand, Elisabeth (Stony Brook University) and Steven Brandt (University of Florida)**

[3] *Pathways to food production in SW Ethiopia: Archaeological survey and test excavation in Kafa*

Southwest Ethiopia's cool, moist conditions and steep topography make for an diverse array of potential environments and resources for prehistoric foragers and farmers. The area has long been considered a probable domestication center for enset, coffee, yams, and other indigenous crops. Survey by the Kafa Archaeological Project (KAP) documented >25 rockshelters. Test excavations yielded a 5000-year sequence at Kumali Rockshelter, and shorter sequences at other rockshelters. Here we present fieldwork results and preliminary analyses of lithics and ceramics. Large, well-preserved faunal and archaeobotanical assemblages from Kumali will require extended analysis, but should shed light on local pathways to food production.

[3] *First Chair*

**Hill, Brett (Hendrix College), Deborah Huntley (Center for Desert Archaeology), Jeffery Clark (Center for Desert Archaeology) and Robert Jones (Center for Desert Archaeology)**

[18] *Get Back: Kayenta and Salado Migrations into Southwest New Mexico*

Research by the Center for Desert Archaeology (CDA) focuses on 14th and early 15th century community formation and dissolution in the Upper Gila and Mimbres regions of New Mexico. Beginning in the late 1200s, Kayenta migrants from northeast Arizona joined local groups to form settlements along several Upper Gila tributaries. These groups were later joined by Hohokam-Kayenta (Salado) migrants from eastern Arizona, a return migration to the ancestral Pueblo World. In this poster we discuss available evidence supporting this model in light of test excavations by the CDA and Hendrix College at a multicomponent Salado site at Mule Creek, New Mexico.

**Hill, David (Lone Mountain Archaeology)**

[110] *Regional Mobility and the Sources of Ceramics Recovered in Southeastern New Mexico and West Texas*

Residential mobility, whether seasonal or habitual, is a major determinate of the archaeological record of the desert plains of southeastern New Mexico and western Texas during the later prehistoric and early historic periods. When petrographic analysis is integrated with more traditional attribute-based ceramic studies inferences can be drawn regarding variability in the degree of residential mobility practiced by different populations in the desert plains and mountains. Based on petrographic analysis, ceramics from the desert plains were derived from two sources; Ancestral Pueblo peoples who resided in permanent communities located to the north and west and by more mobile groups.

**Hill, Erica (University of Alaska)**

[177] *The abject warrior: Defeated bodies of Moche and beyond*

Bodies of defeated warriors become sites in which themes of abjection, subjugation, and annihilation are dramatized in representational and embodied form. Common devices include depiction of defeated bodies as impotent, homogenous, or dismembered. These images use the body as an explicit metaphor for the defeat of a rival polity, symbolizing, through heads, hair, and genitalia, the abject status of the rival. I explore how the Moche of Peru employed this imagery to create a powerful narrative in which neighboring polities experienced defeat through the bodies of their captive combatants. Examples of similar iconography from other complex societies demonstrate that this is a common strategy across time and space.

**Hill, Genevieve (University of Exeter)**

[118] *(Un)holy Places? Exploring the Christian treatment of Wetlands on the Northwest Coast*

The excavation of wetland sites is important for a greater understanding of archaeological landscapes, but it has been overlooked until recently. We must consider the role played by previous notions of 'usefulness' in Western scholarship, and the prejudices which resulted in the paucity of properly excavated wetland sites. Evidence from around the world suggests that the Christian church regarded wetlands as unholy places. By exploring the treatment of wetlands on the Northwest Coast by early Christian missionaries and settlers, this paper will show how Christian prejudices towards wetlands were perpetuated in the New World.

**Hill, Jane (University of Arizona)**

[87] *Language and languages in the Southwest Macro-Region*

Linguistic diversity is strikingly combined with relative cultural uniformity in the Greater Southwest. The origin and structure of the language diversity are reviewed. Special attention is given to evidence for episodes of language contact and the role of linguistic ideologies in mediating linguistic exchange and multilingualism.

**Hill, Mark (Washington State University)**

[152] *Tracing Archaic Social Networks in the Western Great Lakes: Chemical Composition Analysis of Native Copper and its Application to the Development of Regional Systems in the Midcontinent.*

Chemical compositional analysis of native copper is used to explore the nature and extent of archaic communities and inter-community exchange networks, and the role these networks played in mediating social interaction during the Late Archaic (ca. 3600 to 2000 BP). Copper from multiple sites in the western Great Lakes was analyzed using Laser-Ablation – Inductively Coupled Plasma Mass Spectrometry (LA-ICPMS). The results provide the opportunity to examine differing sources areas used by, and exchange between, contemporary populations of the Burnt Rollways phase, the late Middle Archaic Reigh site, and terminal archaic (Red Ocher) Riverside site.

**Hill, Matthew (Iowa State University), David W. May (University of Northern Iowa) and Thomas J. Loebel (University of Illinois-Chicago)**

[190] *An Excavated Clovis Cache from Central Iowa*

Within the Clovis archaeological record there exists about a dozen known "isolated" artifact assemblages composed variably of bifacial cores and preforms, finished points, unifacial tools, and occasionally, bone and ivory rods. The Carlisle cache from Warren County, Iowa is a previously unrecognized utilitarian cache of 37 Clovis artifacts. It was documented and recovered in situ on a gently-rolling, terminal Wisconsin outwash terrace that drained the Des Moines Lobe of the Laurentide ice sheet. The cache offers new insights on Clovis technological organization, including cache construction, and patterns of land use and mobility.

Hill, Matthew E. [41] *see* Knell, Edward J.

**Hill, Rebecca (Tulane University) and Melissa Galvan (Universidad de las Américas Puebla)**  
[154] *Terminal Classic Decline and Reorganization in the Bolonchén District of the Puuc Region, Yucatán*

The Terminal Classic witnessed social and economic reorganization related to the changing political systems of the Maya lowlands. This paper examines material culture variability in the Bolonchén district of the Puuc region, where in some cases site abandonment appears to have been a gradual process at the end of the Terminal Classic period. Special consideration will be given to data resulting from recent excavations within the urban core of the site of Huntichmul, where architectural evidence suggests a post-monumental occupation following the cessation of elite activities.

[154] *First Chair*

**Hill, Jr., Matthew (University of Iowa) and Kevin V. Flaherty (University of Iowa)**

[29] *Long-term Trends in Diet Breadth: Changes in prehistoric hunting on the Great Plains*

This study involves the analysis of published information on human use of animals at more than 100 archaeological sites from across the Great Plains to better understand the nature human-animal interactions over the last 13,000 years. Specifically, this project hopes to explore the nature of prehistoric subsistence by tracking which animals Plains groups hunted and how hunting decisions changed depending on (1) regional differences in availability of key prey species, such as bison, (2) the introduction of new hunting technologies (bow-and arrow) or techniques (cliff jumps and corral kills), (3) the development of corn farming and (4) human overhunting that would have changed the population structure of prey communities.

**Hilton, Michael (Cotsen Institute of Archaeology at UCLA)**

[77] *Quantifying Postdepositional Translocation of Archaeological Materials: An Update on a Long-term Experiment*

Archaeologists frequently acknowledge the potential for postdepositional translocation of the archaeological record. Empirical data quantifying the process, however, are less common. This paper reports the updated results of a long-term experiment designed to quantify subaerial and subsurface displacement. After nine years, surface artifacts exhibit an average lateral movement of 47 cm. In a separate experimental plot designed to eliminate specific transport agents, average movement over the same period was limited to 18 cm. Vertical movement of buried artifacts was also recorded, but transport agents selectively relocated artifacts based on specific physical properties. The mechanisms responsible for artifact displacement are explored.

**Hirshman, Amy (West Virginia University)**

[183] *Crafting States: Reflections on the Necessary Intensity of Ceramic Production*

Both broad political economy and cultural evolutionary models of the emergence of social complexity emphasize the development of craft producer specialization with state emergence. Using ceramics from the Mesoamerican Late Postclassic Tarascan state as a test case, this paper reconsiders the utility of producer specialization, often examined as ceramic producer specialization, as an expectation for the construction of models of the emergence of social complexity.

**Hirth, Kenneth (Penn State University) [20] *Discussant***

**Hise, Alana (Edwards-Pitman Env.) and Garrett Silliman (Edwards-Pitman Environmental, Inc.)**

[80] *Public Involvement at 9CK1*

During recent investigations of 9CK1, The Long Swamp Site, archaeologists had the opportunity to interact with numerous groups in the local community. These included student groups from elementary and secondary schools, local archaeological societies, citizens from nearby Ball Ground, Georgia, and representatives from Native American groups. Approximately 100 visitors participated in the process of data recovery excavations at 9CK1. This paper provides an overview of public outreach and interaction, which facilitated greater awareness of the importance of archaeology for the region.

**Hjermstad, Alisa (SWCA) and Caryn Berg (SWCA)**

[34] *Relationships between Water Resources and Human Land Use in the Piceance Basin*

The Piceance Basin of western Colorado holds abundant archaeological evidence for use of the

area by numerous human cultural groups. Given the relative aridity of the region, many of those groups likely focused their diverse activities on the major drainages within the basin. This poster explores that idea by first creating a model of water availability based on river size, permanence, and direction of flow, and then comparing site locations and types to that fluvial landscape. In this way, it is possible to track changing relationships between human land use and availability of water resources over space and time.

**Hochrein, Michael (F.B.I.)**

[28] *Convincing LEO: Successful Interaction between the Archaeologist and Law Enforcement Officials in Crime Scene Investigations*

Law enforcement's consultation with, and use of, civilian experts in processing crime scenes is most often influenced by three factors: concern of expense; failure to realize potential evidence which could be revealed through applied expertise; and issues of entrusting legally sensitive material to non-law enforcement personnel. The presenter calls upon his experiences as a contract archaeologist, criminal investigator, and forensic archaeologist to help explain the relationship between law enforcement officials and academically trained archaeologists. The perspectives of both positions are examined using case histories and knowledge of crime scene processing guidelines. Suggestions are offered on how a cooperative and continuing relationship might be developed between civilian and law enforcement investigators. Aspects of training and cross-training represent the most basic blocks toward building a foundation of trust and confidence between the expert and investigator. Once that rapport is established, it is only maintained through the demonstration of archaeological protocols which recognize, preserve, and document trace, environmental, and geotaphonomic evidence at crime scenes. Equally important but often foreign to most non-law enforcement are the legal requirements and presentation of evidence before courts of law. Understanding the differences and similarities between archaeological and crime scene investigators is not difficult. Convincing law enforcement officials of the archaeologist's awareness of same requires concerted effort and long term program planning on both sides.

**Hodell, David (University of Cambridge) and Jason Yaeger (University of Wisconsin - Madison)**

[83] *Understanding the Role of Climate Change in the Maya Past: Toward a Multidisciplinary Collaborative Methodology*

Scholars have argued very different positions regarding the role(s) that climate change has played in the history of Maya civilization, particularly the Maya Collapse. We have suggested elsewhere that tackling this complex topic requires the collection and integration of very disparate datasets, close attention to temporal and regional variation, and a focus on the interrelationships between changes in climate, culture, and environment. In this paper, we present an approach for productive collaboration between paleoclimatology and archaeology for the Maya lowlands, grounded in a specific case study of the upper Belize River valley.

**Hodell, David [83]** see *Iannone, Gyles*

**Hodgetts, Lisa (University of Western Ontario)**

[145] *The Place Where People Travel: An Archaeological Survey of Aulavik National Park, Western Canadian Arctic*

July 2008 marked the first season of survey as part of the Aulavik Archaeology Project. The project explores the seasonal use of the Banks Island interior, where generations of people spent the summer months hunting, particularly during the late prehistoric and early historic periods. Multiple tent rings, caches and graves are the physical markers of these journeys, and they were revisited, re-made and reinterpreted over the years. Their distribution evokes a sense of movement and cyclical time, and the features themselves suggest complex, fluid social networks of people traveling as multiple family groups, single nuclear families and hunting parties.

**Hodgins, Greg [130]** see *Jones, Kevin*

**Hoekman-Sites, Hanneke (Florida State University)**

[130] *Examining Animal Product Use Patterns on the Great Hungarian Plain during the Neolithic and Copper Age Periods*

The transition from the Mesolithic to the Neolithic and beyond changed numerous aspects of people's every-day lives in southeastern Europe, including their dietary choices, degree of mobility, and how they interacted with others. Domestication and secondary product use impacted how communities worked economically and socially. My poster focuses on how residue

analysis studies can be used to examine these impacts. My goal is to examine dairy use as part of the larger economic intensification pattern from its earliest known use in the Early Neolithic through the Late Copper Age in the Great Hungarian Plain.

**Hoffman, Curtiss (Bridgewater State College)**

[153] *Late-Transitional Archaic Exchange in Eastern Massachusetts*

The Late-Transitional Archaic period (ca 5500 – 2700 B.P.) is one of the most intensively studied phases in eastern Massachusetts. Archaeologists have developed a robust picture of the subsistence activities and the belief systems of that phase. The social dimensions of this period are not as well studied. Yet there are several sites of this period which appear to have been centers for the production and/or transfer of specialized artifacts to other sites in the region. This suggests that there was a system of intra-regional exchange which related these centers to one another and to the habitation sites in the region.

**Hoggarth, Julie (University of Pittsburgh) and Meaghan Peuramaki-Brown (University of Calgary)**

[185] *Ancient Maya Settlement in the Belize River Valley: A Comparative Perspective from Baking Pot and Buenavista del Cayo, Belize*

Significant research in the Maya Lowlands over the past half century has allowed for archaeologists to develop broader regional comparative statements about settlement, households, and potentially, associated social organization for this region. This paper, a joint effort between scholars working on two different archaeological projects operating in the Upper Belize River Valley, aims to compare and contrast settlement and household variability from various sites within the Belize River Valley and adjacent areas, with particular focus on the sites of Baking Pot and Buenavista del Cayo. The authors will suggest some organizational and environmental principles that may produce the patterns observed to date, and how such information can help to direct future excavation and interpretations.

**Hohmann, Bobbi (Fernbank Museum), Andrew Vaughan (Kennesaw State University) and Terry Powis (Kennesaw State University)**

[192] *Investigating Middle Preclassic Specialized Shell Bead and Lithic Production at Pacbitun, Belize*

Shell was used as a form of personal adornment among the Lowland Maya from the Preclassic to Postclassic periods; however, little is known about the industry that produced these items, particularly during the Preclassic period. This paper will report on the shell bead and lithic industries from the Belize Valley site of Pacbitun, where archaeological investigations have revealed evidence of Middle Preclassic (900-300 BC), household-level shell ornament production. Evidence of specialized production will be evaluated and the relationship between these early craft industries and the development of sociopolitical complexity in the region will be explored.

**Hokanson, Jeffrey (e2M, Inc.) and William Walker (New Mexico State University)**

[48] *Garbage is Garbage*

The commonsense notion of garbage is an analytical creation that should be thrown away. Garbage and its synonyms (trash, midden, refuse) derive from an anthropocentric definition of society where people are the only social actors. When we reconceptualize society as the interactions between people, objects (ecofacts, artifacts, architecture), nonhuman beings (e.g., ghosts, ancestors) and forces (e.g., mana), then we can escape our anthropocentrism and begin creating new analytic terms. We argue that the method and theory of archaeological site formation process research are productive; they simply need to expand the range of activities played by nonhuman social actors.

**Holdaway, Simon [145] see Lin, Sam CH; [127] see Douglass, Matthew J.**

**Holdridge, Genevieve [130]**

*Function and Use of Space at Sotira-Kaminoudhia, an Early Bronze Age site on Cyprus*

This presentation concerns examining the spatial distribution of flint relative to other artifacts at the Early Bronze Age site of Sotira-Kaminoudhia, Cyprus using GIS software. Since Sotira was destroyed by an earthquake, a spatial analysis of artifacts offers insight on the direct use of space because many artifacts were left in situ. The aim was to determine how flint was distributed throughout various locations on the site and its correlation with other artifacts. My purpose is to show that through the exploration of the spatial distribution of artifacts one can learn about the function of diverse spaces at a site.

**Holguin, Jesus [85]** *see Creamer, Winifred*

**Hollenbach, Kandace D. [53]** *see Yerka, Stephen J.*

**Hollenback, Kacy (University of Arizona) and Maria Nieves Zedeno (University of Arizona)**  
[131] *"The Return of Irving Hallowell" or Why Archaeologists and Indians are Reading Old American Ethnographies*

In the post-NAGPRA era, growing trends toward collaborative research in archaeology have led to rich interpretive frameworks for the discipline. Interactions with Native Americans reveal the importance of continuity in technology, practice, belief, and identity. Particularly significant is the increasing realization that nonwestern worldviews actively shape material production, use and discard, thus impacting the formation of the archaeological record in untold ways. We envision a co-future for archaeology where the ontologies reflected in these and other processes are not only used for interpretation but also explicitly incorporated into archaeological method and theory. A brief study of taxonomy illustrates this vision.

**Hollenback, Kacy [157]** *see Cutright-Smith, Elisabeth;* [189] *see Roos, Christopher I.*

**Holliday, Vance (University of Arizona), Edmund Gaines (University of Arizona) and Guadalupe Sanchez Miranda (INAH Subdirectora de Laboratorios y Apoyo Academico)**  
[190] *2008 Investigations at El Fin del Mundo, a Clovis Site in Sonora, Mexico*

The second season of investigations at El Fin del Mundo focused on further exposing a proboscidean bone bed and mapping and testing a nearby Clovis activity area. The bone bed represents two disarticulated individuals at the base of lake deposits (diatomaceous earth). It dates >10,000 14C years BP. Flakes recovered from the bone bed and the discovery of two out-of-place Clovis points near the eroded margins of the bone bed raise a strong possibility that the site is an intact Clovis feature. The activity area, probably a campsite, is on uplands ~650 m from the bone bed. Systematic survey and testing of the area yielded hundreds of lithic artifacts including complete and broken Clovis points, large blades, end scrapers, and bifacial thinning flakes (including classic Clovis "overshot" flakes).

**Holliday, Vance [18]** *see Gaines, Edmund P.;* [18] *see Ballenger, Jesse*

**Hollowell, Julie [174]** *see Nicholas, George P.*

**Holly, Lance (University of Colorado) and Phillip Trella (University of Virginia)**

[188] *Archaeological Discussion on the Information Superhighway*

More than simply a tool for the dissemination of information, the Internet is fast becoming a public forum in which all types of information are freely discussed and commented on. This paper presents the results of several months' worth of discussion related to archaeology and archaeological news items from news sites, discussion sites, and official archaeology program web forums (sites such as newsvine.org, history.com, and discovery.com). The aim of the paper is to assess the efficacy of such discussion forums for engaging and educating the public on anthropological archaeology in general and on current archaeological research.

**Holmes, Sarah (MPMRC)**

[173] *"To Warrant and Defend": Incorporating Land Deed Research into the Reconstruction of Past Lifeways*

After two decades archaeologists continue to experience the unique opportunity of working with the Mashantucket Pequot Tribal Nation on their Ethnohistory Project. The Tribe's long term commitment to this research is resulting in a substantive contribution to our understanding of past lifeways in southern New England. Of particular interest is the intensive focus on land deeds pertaining to the Mashantucket and Eastern Pequot. As land records are proving an invaluable resource, I will discuss how a project initially aimed at defining the ancient reservation boundaries at Mashantucket evolved into an effective research method offering multiple benefits. When integrated into a database, land deeds identify more than boundary markers, they provide insight into issues surrounding property rights, shifts in demography, land use and settlement patterns, as well as notations on local flora.

**Holstein, Harry (JSU-ARL)**

[106] *Stone Structure Sites in Alabama and the Southeastern United States: A Result of Historic Land Management Activities and/or Prehistoric Woodland and Mississippian Memorials of the Past*

Scattered across the mountains, ridges, plateaus and valleys of Alabama and the Southeastern

United States are hundreds of loose stone mounds, stone walls, and stone effigy sites. This paper discusses the problems encountered in attempting to determine whether prehistoric or historic populations constructed them. Jacksonville State University archaeologists have been investigating stone structure sites in northern Alabama for nearly 30 years, and believe in most cases there are logical ways of sorting out historic piles of rocks from prehistoric Aboriginal ones.

**Honeychurch, William [16]** *see Rogers, J Daniel*

**Hooda, Peter [175]** *see Gillmore, Gavin K.*

**Hooe, Malcolm [43]** *see McElroy, Stephen A.*

**Hoopes, John (University of Kansas) [110]** *Discussant; [117]* *see Salgado Gonzalez, Silvia*

**Horlings, Rachel (Syracuse University)**

[78] *Historic Maritime Trade in Coastal Ghana: Site Formation Processes of an Unfortunate Merchantman*

This paper is a discussion of an integrative and interdisciplinary approach to investigating site formation processes within the natural and historical cultural settings of a select shipwreck site of an historic merchantman in Ghana. The investigation of shipwreck site formation processes sets the stage for the interpretation of events from an historical maritime past and supports the investigations of wider cultural phenomena. In a region such as coastal Ghana, where relatively little is known concerning the maritime environment and its effects on historic trade and on consequent submerged cultural resources, an understanding of site formation processes is foundational in terms of how sites are investigated and interpreted. Data from this shipwreck site, in conjunction with data from experimental control areas, provide insights into historic trade in the region, and make available a comparative data set for future investigations on a regional scale.

[78] *First Chair*

**Horn, Sherman (Tulane University)**

[192] *Construction Techniques of Middle Preclassic Residential Platforms at Cahal Pech*  
Recent work in Plaza B at Cahal Pech, Belize has revealed an extensive Middle Preclassic occupation at this hill-top center. During the 2008 field season, the Belize Valley Archaeological Project expanded on an earlier trenching operation to reveal more of the architecture of this period. Evidence indicates that construction techniques differed from expected patterns of uniform stone distribution, providing a more flexible mode of residential platform construction in which stones were used to build up low-lying areas below platform floors. These findings differ from those previously reported from Cahal Pech and elsewhere in the Middle Preclassic Maya Lowlands.

[192] *Second Chair [192] Second Organizer*

**Horowitz, Mara T. [110]** *see Morrison, Jerolyn E*

**Horton, Beth (Washington State University)**

[118] *The Discriminating Mess: Faunal Remains from the Nineteenth Century U.S. Army Occupation at Fort Vancouver, Washington*

Fort Vancouver, Washington served as the administrative headquarters for the U.S. Army in the Pacific Northwest during the period of the Indian Wars and the Civil War. Recent excavations of middens associated with the Commissioned Officers and Enlisted Soldiers provide an opportunity to better understand the lives of male residents of military communities in this region. This paper examines whether the recovered food types and butchery cuts prepared and served to these consumers in the military kitchens, messhalls and at assigned quarters reflect historically documented class differences and food preferences.

**Horwath, Briana (University of Iowa)**

[138] *Dental Evidence for Biological Affinity in Neolithic Portugal: An Analysis of Two Neolithic Burial Sites*

This paper details the results of a study of the biodistance between and within two late prehistoric burial populations from the Estremadura region of Portugal through the analysis of dental morphology. In this study, the dental remains recovered from the Middle/Late Neolithic site of Feteira II (3600-2900 BC) and the Late Neolithic/Early Bronze Age site of Bolóres (2800-1800 BC) are compared using the Arizona State University Dental Anthropology scoring system. Discerning the degree of genetic relatedness between and within these communities provides insights into migration patterns and social organization.

**Hosoya, Leo (Research Institute for Humanity and Nature)**

[167] *Wild Food for Farmers- Archaeobotanical and ethnoarchaeological reconstruction of wild resource exploitation by Chinese early farmers*

This paper discusses significance of wild food plant uses, particularly nuts, in subsistence strategy of early farmers in China. Recent studies indicate importance of wild food plant uses for not only hunter-gatherers but also early farmers, e.g. the discovery of a huge amount of acorns in Chinese early farming sites (5,000-4,500BC). In addition, re-studying so-called "grinding stones" of the age, it has been revealed that it include the particular style of ones of more suitable for crushing nuts, in a considerable number. The dynamic subsistence landscape of the Chinese early farming age is discussed based on those research results.

**Houk, Brett (Texas Tech University), Débora Trein (The University of Texas at Austin) and Gregory Zaro (University of Maine)**

[64] *Evidence for "Ritual Engineering" in the Royal Precinct Plan of La Milpa, Belize*

The study of urban planning among ancient Maya settlements is neither without its difficulties nor its detractors, but evidence suggests the Maya manipulated architecture to make cosmological and political statements. While royal precincts at larger centers required careful engineering to accommodate technological, sociopolitical, and ritualistic concerns, the cosmological/ritual elements of site plans are perhaps most difficult to decipher. However, recent research at La Milpa, Belize, suggests the ancient Maya explicitly engineered ritual elements into their planning. Stylistically-related caches from Plaza B demonstrate ancient Maya "ritual engineering," which served to unify otherwise discrete architectural elements within a plaza-based royal precinct plan.

[64] *First Chair*

**Houle, Jean-Luc (University of Pittsburgh)**

[16] *Demography, Subsistence and Mobility: The Social Organization of Early Pastoralists of Central Mongolia*

Unprecedented settlement data now provides the social context for the Bronze Age groups of central Mongolia that built monuments that supersede in aboveground elaborateness anything else of its nature in the Bronze Age steppe. This data now offers a more comprehensive picture of the subsistence and mobility patterns of these early pastoralists. Moreover, it is now possible to address more clearly some enduring issues relating to the social organization and degree of societal complexity of the groups that preceded the first nomadic polity to develop in Inner Asia, and thus to evaluate the dependency hypothesis of sociopolitical development among mobile pastoralists.

[16] *First Chair* [16] *Second Organizer*

**Hovezak, Tim (National Park Service) and Leslie Sesler (La Plata Archaeological Consultants)**

[144] *Filling the Void: the Protohistoric and Early Historic Periods in Northwest New Mexico's Upper San Juan Basin*

The departure of Ancestral Puebloan peoples from Northwest New Mexico's San Juan Basin resulted in the depopulation of this vast area. Sometime within the next two centuries, the region began to be peopled by Athapaskan migrants who would forever change the cultural landscape of the southwest. The Athapaskans entered this vacant land as small, related groups of hunter-gatherers and itinerant farmers, who successfully adapted to a new and hostile physical environment and coalesced to forge a cultural identity strong enough to endure the tumultuous early historic period, eventually to emerge as the most populous Native American culture in the southwest.

Hovezak, Tim [144] *see Sesler, Leslie*

**Howard, Margaret (Texas Parks & Wildlife)**

[189] *10,000 Years of Occupation at Hueco Tanks, El Paso County, Texas*

The syenite hills of Hueco Tanks State Historic Site serve as landmarks for this Chihuahuan desert oasis. They provided shelter for occupations, held water, were rock art canvases, supported grinding facilities, and produced elements for roasting pits. Moist soils around the hills foster a plant and animal refugium. Visited by Folsom and Archaic hunter-gatherers, an agricultural village was later established, then use shifted to seasonal plant processing. Spanish explorers and the Butterfield Stage traversed the trail through the Tanks, and a ranch was established in 1898. Since the 1920s, recreational use has posed challenges for preservation of this long record.



**Howie, Linda (University of Western Ontario), Christine D. White (The University of Western Ontario) and Fred J. Longstaffe (The University of Western Ontario)**

[68] *Potographies and biographies: Identity as seen through life histories of selected Maya pots and people*

The social biographies of humans are encrypted in the biology of their skeletons, and can be used to understand individual and group identity in archaeological contexts. Similarly, pots have identities conferred upon them by way of the choices of their makers and users, from their initial creation to their final deposition. Where isotopic analysis aids in the reconstruction of the constituents and origins of human tissues, so does petrographic analysis for pottery vessels. This paper examines the ways in which food and pots signal identity within Terminal Classic mortuary contexts at the Maya site of Lamanai, Belize.

**Howie, Linda A. [102] see Wiewall, Darcy L.**

**Hritz, Carrie (The Pennsylvania State University)**

[63] *Landscapes within Landscapes: Deciphering the Mesopotamian palimpsest*

Inhabited for perhaps 8 millennia, the alluvial plain of southern Mesopotamia is best described as a palimpsest of ancient and modern features. In terms of the ancient landscape, both anthropogenic and natural forces have created a complex set of windows of ancient landscapes within landscapes and resulted in the horizontal layering of relict channel networks. Traditionally, these preserved pieces of the ancient cultural landscape have formed one component to larger narratives of social and political evolution in ancient Mesopotamia. This paper will explore the use of spatial analysis and its tools, GIS and remote sensing, to map coherent contemporary landscapes and place them in their historical context.

**Hroncich, Maria E. [176] see Condon, Peter C.**

**Hruby, Zachary (Humboldt State University)**

[48] *Rethinking Notions of Garbage in Special Deposits of the Ancient Maya*

Classifying certain artifacts in the archaeological record as garbage in fill or midden contexts is one of the few things that archaeologists can feel relatively certain about. The deposition of apparent refuse in tomb, cache, and termination contexts, however, reveal a need to re-conceptualize the way we categorize, and Ancient Maya may have thought about, various items. Linguistic and ethnographic accounts related to some Maya notions of garbage are surveyed and compared to archaeological deposits.

[48] *Discussant* [48] *Third Organizer*

**Huckerby, Cheryl [51] see Puckett, Heather R**

**Hudson, Erin (Cibola National Forest)**

[40] *Walking and Watching: Applying Space Syntax Analyses to Cultural Landscapes*

Space syntax analysis provides one way to quantify spatial relationships in architecture that are believed to reflect the social organization of the builders and occupants of archaeological sites. I propose that this approach can be expanded and used at a landscape scale, particularly by utilizing the tools available in ArcGIS. I will discuss the body of theory relevant to building space syntax analyses for cultural landscapes and outline the process of conducting such an analysis. The value of this approach to landscape scale investigation is demonstrated in a preliminary case study using archaeological data from west central New Mexico.

**Hudson, Tommy (Geo Engineering)**

[109] *Serpentine Stone Walls and the Tri-Level Cosmos*

Prehistoric serpentine stone walls have been constructed throughout the southeastern United States. In an overview of these walls and their location on the landscape the author intends to demonstrate their relationship to the tri-level cosmos. The author defines the tri-level cosmos as the widespread Native American belief in a lower world, middle world, and upper world tiered cosmic view.

**Hughes, Randall [91] see Emerson, Thomas E.**

**Hull, Sharon (University of Manitoba), Joan Frances Mathien (Maxwell Museum, University of New Mexico) and Mostafa Fayek (Maxwell Museum, University of New Mexico)**

[66] *Multiscalar Examination of Turquoise Procurement in Pueblo Bonito, Salmon, and Aztec Ruin*

The amount of turquoise artifacts recovered at Pueblo Bonito in Chaco Canyon suggests that it

was an important commodity in local trade networks. We used a new method to identify the provenance regions of turquoise procurement for Pueblo Bonito located in Chaco Canyon and the Salmon and Aztec communities near the San Juan River. The results are examined through space and time within a multiscale framework including microscale (site level), regional scale (between the three communities), and at the macroscale (the Greater Southwest) adding insight into the relationship between the three communities and their place in larger turquoise trade structures.

[168] *Second Organizer* [168] *Second Chair*

Hull, Sharon [168] *see* Fayek, Mostafa J.

**Hulse, Eva (University at Buffalo), Andre Costopoulos (McGill University), Ezra Zubrow (University at Buffalo), Jari Okkonen (University of Oulu) and Samuel Vaneekhout (University of Oulu)**

[143] *Social Change and the Environment in Neolithic Northern Finland*

Between 6000 and 4000 years BP, people living in the Kierikki region of northern Finland reorganized themselves dramatically. The past few decades of archaeological work in the area show that people transitioned from low-density, mobile settlement patterns to high-density, more-sedentary settlement accompanied by increased long-distance trade and monumental architecture. Social changes were influenced both by the dynamic natural environment (in particular, rapid land uplift) and the dynamic, mid-Holocene social environment of northern Europe.

[143] *First Chair*

Hulse, Eva [145] *see* Korosec, Gregory J.

Hundtoft, Brooke [44] *see* Lipo, Carl P.

**Hung, Ling-yu (Washington University)**

[62] *The social implications of changes in painted pottery in late Neolithic NW China*

Potters from late Neolithic northwestern China produced thousands of painted pottery vessels decorated with intricate designs. Among their other uses, such pottery was commonly used as grave goods to honor the deceased during this period. While the quantity of painted vessels increased over time, more and more vessels gradually reveal less elegant manufacturing skills. Specifically, the extent of pottery elaboration in terms of the effort expended on design, surface treatment, and texture was declining. Through mortuary comparison, this paper considers the possibility of a change in the social implications of painted pottery as it became increasingly prevalent.

**Hunt, Terry (University of Hawai'i) and Carl Lipo (California State University Long Beach)**

[127] *A cultural phylogeny of statues on Rapa Nui (Easter Island) and the implications for prehistoric social organization*

The production and transport of hundreds of monumental statues (moai) on Rapa Nui (Easter Island) represent major investment in cultural elaboration by prehistoric islanders. Explanations for such investment require measuring temporal and spatial variability in the statues. Using a method based in cultural transmission, cladistics, and occurrence seriation, we analyze traits hypothesized to be a cultural phylogeny of the statues. Our analysis points to implications for the scale of prehistoric social organization and for investment in cultural elaboration on this famous island.

Hunt, Terry [145] *see* Gard, A. Rowan; [44] *see* Lipo, Carl P.

**Hunt, Timothy (Arch. Science Co-op)**

[88] *Fracture Surface Characterization of Heat-Treated Cherts*

Contact profilometry and fractal analysis are used to characterize the fracture surfaces of various cherts commonly found in the archaeological record of the Lower Mississippi River Valley. The effect of thermal alteration on the fracture mechanics of these materials is explored by comparing measurements of fractal dimension (D) obtained by analysis of fracture surface profiles created before and after heat-treatment.

**Huntley, Deborah (Center for Desert Archaeology), Barbara Mills (University of Arizona), Judith Habicht-Mauche (University of California, Santa Cruz) and Thomas Fenn (University of Arizona)**

[13] *Embedded Networks? Pigments and Long-Distance Procurement Strategies in the Late Prehispanic Southwest*

Our previous research on glaze paint technology in the Zuni and Mogollon Rim regions has identified local glaze paint recipes and tracked changes in these recipes through time. We have also pinpointed sources for ores used to make glazes, indicating a variety of sources but a strong connection with the Rio Grande region. This paper builds upon previous work, combining old and new analyses to assess spatial and temporal diversity in interregional social networks among late prehispanic Pueblo groups. We examine the idea that long-distance ore procurement was embedded in other kinds of resource acquisition strategies.

**Huntley, Deborah [18] see Hill, Brett; [13] see Schleher, Kari L.**

**Hurst, Winston [144] *Discussant***

**Huster, Angela (Arizona State University)**

[24] *Establishing a Chronology for the Postclassic Site of Calixtlahuaca*

Initial radiocarbon dates and general ceramic cross-ties indicate that the Central Mexican site of Calixtlahuaca was occupied during the Middle and Late Postclassic periods. I use cluster analysis based seriation of ceramic type frequencies to determine more fine-grained possible chronological phases. The phases are then tested against stratigraphic relationships, radiocarbon dates and imported ceramics to determine their validity. The chronology will allow the investigation of changes associated with the site's rise to become a regional capital, and its conquests by the Triple Alliance and Spanish.

[24] *First Chair*

**Hutchinson, Dale**

[171] *Entradas and Epidemics in the Sixteenth Century Southeast*

Sixteenth century Spanish entradas into the Southeast inaugurated a number of dramatic alterations for native populations. New infectious diseases and increased mortality resulting from those diseases remains among the most important impacts of Spanish movements. In the past three decades, archaeologists and bioarchaeologists have contributed to significant advances in the examination of disease in archaeological samples from the time of the entradas. Additionally, they have increasingly contextualized disease epidemics within the larger colonial process. I examine theoretical issues about of new diseases into the Southeast, and current archaeological evidence about the impact of introduced disease on native populations.

[82] *see Hedman, Kristin M.*

**Hutira, Johna (Northland Research, Inc)**

[188] *Food, Features, and Fun! What Archaeologists Can Offer the Public*

How does archaeology benefit the public? This question is often asked by funding sources. How do we answer it? The first step is to identify the various "publics". Second, the message must be focused and clear. Finally, the delivery system needs to be efficient and understandable. This paper discusses various strategies for identifying the audience and formulating messages and programs to deliver appropriate information.

[188] *Third Organizer*

**Hutson, Scott (University of Kentucky)**

[131] *Remembering then, remembering now: (de)constructing heritage in Yucatan, Mexico*

Though contemporary Yucatecans share much with the ancient Maya—language, farming techniques, etc—the notion of Maya continuity has undergone critical re-evaluation. Some contemporary Maya speakers identify with the ancient past, some do not. Many are re-negotiating their identity, thus highlighting the constructed nature of heritage. Despite these discontinuities and instabilities, I argue that the very process of identity construction in the present anchors people in the past. This is not just because rejections of the past are also rememberings of the past, but because both past and present constructions of heritage share a key process: memory.

[86] *see Magnoni, Aline*

**Iannone, Gyles (Trent University), David Hodell (University of Florida) and Jason Yaeger (University of Wisconsin, Madison)**

[83] *The Great Maya Droughts: A Critical Introduction*

In recent years, drought has gained popularity as the principal cause of several "collapses" in the history of Maya civilization, including the Preclassic Collapse, the Maya Hiatus, and the Classic Collapse. This paper introduces the key datasets used in most drought-driven models of collapse and discusses the following issues that complicate assigning drought a principal causal role in these processes: 1) the imprecision in dating paleoclimate and archaeological records; 2) the challenges of coordinating distinct paleoclimate and archaeological sequences; 3) the difficulties of quantifying climate change; and 4) a tendency by both archaeologists and paleoclimatologists to simplify the other field.

[83] *First Chair*

**Iannone, Gyles [83]** *see Aimers, Jim J.*

**Ibanez, Juana [163]** *see White, Andrea P.*

**Iizuka, Fumie and Lesley Frame**

[130] *Petrographic Provenance Analysis of Monagrillo Pottery (ca. 4,500-3,200 B.P.) of Central Panama*

Monagrillo pottery (ca. 4,500-3,200 B.P.) of central Panama is among the oldest pottery in Central America. A petrographic study of small Monagrillo pottery samples taken from the Pacific coast, the Pacific plain and foothills, and the Caribbean slope of central Panama suggested that most pottery was made in situ using local clays but not all the pottery found on the coast and the plain was produced there. Since the degree of pottery movement is unknown, we studied Monagrillo pottery from a large number of sites from Central Panama and increased the sample size. We conducted petrographic study to deduce pottery circulation. Our research provided insightful result.

**Imlay, John [174]** *see Burgess, Laurie E.*

**Immich, Jennifer (University of Minnesota) [61]** *First Chair*

**Iñáñez, Javier (Smithsonian Institution), Amelia Rodríguez Rodríguez (University of Las Palmas de Gran Canaria), Jaume Buxeda i Garrigós (University of Barcelona), Robert J. Speakman (Smithsonian Institution) and Vassilis Kilikoglou (National Center for Scientific Research Demokritos)**

[49] *Obsidian From Canary Islands (Spain): A Multidisciplinary Investigation*

Obsidian in the Canary Islands was exploited by the original population on Tenerife, Gran Canaria and La Palma. Multiple obsidian sources are known from Gran Canaria. However, the only identified source showing relevant archaeological evidence of organized exploitation is Hogarzales Mountain. An archaeometric and archaeological research project is currently undergoing to study the obsidian exploitation and artifact production in the Canary Islands. Samples were recovered from different galleries and archaeological sites. Analytical work has been conducted by ICP-OES, LA-ICP-MS, and NAA. So far, the project has enabled the characterization of one of the most important obsidian sources exploited in antiquity.

**Ingram, Scott (Arizona State University)**

[143] *Conflict and Climate in the North American Southwest*

Changes through time in the distribution of settlements across a landscape, particularly spatial clustering and unoccupied zones, are one type of evidence to support the existence of hostilities and macro-regional alliances in prehistory. Intra-regional climate variation can also create differentials in potential resource productivity that influence the distribution of settlements. This paper presents the results of a synthesis of settlement and paleoclimate data in central and southern Arizona from A.D. 1200 to 1450. The extent to which climate variation and geographical differences in resource productivity explain settlement pattern changes used as evidence for endemic warfare in the region will be evaluated.

**Inomata, Takeshi (University of Arizona)**

[177] *Representations of the body and violence among the Classic Maya*

Torture and sacrifice were important themes of public rituals and ceremonies among the Classic Maya. The ruler and other elites took central roles in these acts and a large number of community members participated. These events constituted an arena of imposition, negotiation, and

subversion of diverse views and agendas, concerning community identities, the power of elites, and social roles of different groups. The results of recent research at Aguateca and Ceibal, Guatemala, elucidate complex processes surrounding the body and violence through the social transformation at the end of the Classic period.

**Iriarte, Jose (University of Exeter)**

[139] *The southern cone, the Rio de la Plata basin, and their interaction with the South American lowlands*

New archaeological research in the southeastern sector of the La Plata Basin, which represent an integral part of the southern cone of South America, are begging to reveal unexpected and unique cultural trajectories in a region that has traditionally been considered a marginal one. This presentation summarizes these new data and argues for the need of examining these cultural developments at a broader geographical scale exploring the interaction with other parts of the South American lowlands.

**Isaza, Ilean (Boston University)**

[65] *Reconstructing the Nature of pre-Colombian Communities in the Lower La Villa Valley, Gran Coclé, Panama*

A settlement survey of the lower La Villa valley in Panama documented archaeological sites within the territory controlled by the 16th century chief called Parita. The evidence that was accumulated from the sites, including their material components, internal differentiation, and inter-relations, complemented the Colonial accounts. According to the chroniclers, the La Villa valley was heavily populated and cultivated, an observation confirmed by the study. During the presentation of this paper, I will address the nature of the La Villa pre-Colombian communities through the physical evidence of surface features and material culture.

**Iseminger, Bill (Cahokia Mounds) [186] Discussant**

**Isendahl, Christian [7] Discussant**

**Ito, Shinji (Kokugakuin University)**

[167] *Why did people go up the Hill? : Retrospect and Prospect on the Prehistoric Mystery of Hilltop Settlements in Northern Ryuku, Japan*

On the Northern Ryuku Islands (Okinawa, Amami and Tokara Islands), in the Early 4-5 Phases of the Ryukyu-Jomon Period (ca. 2,000-4,000 BP), many habitation and shell-midden sites shifted to locations on top of high hills or the upper slopes of such hills. In the past half century, many scholars have noted this phenomenon but its significance was not clear until recently. In this paper, I discuss these changes in the cultural landscape from the viewpoint of prehistoric settlement systems in Oceania and Mainland Japan.

**Ives, Timothy (University of Connecticut)**

[153] *Large Pit Feature Formation and Use at the Late Archaic Preston Plains Site in Southeastern Connecticut*

Archaeological investigations at the Late Archaic Preston Plains site have revealed large, enigmatic pit features numbering in the hundreds. Similar feature concentrations have been discovered at sites in Delaware and eastern Massachusetts. Researchers have proposed several explanations as to how such features form and whether or not they are even cultural manifestations. Systematic archaeological sampling at Preston Plains in 2008 has resulted in the collection of data that sheds new light on the formation, morphological diversity, and cultural significance of these features.

[153] *First Chair*

**Iwase, Akitoshi [165] see Yamamoto, Naoto**

**Jackson, H (U Southern Mississippi), Margaret Scarry (University of North Carolina) and Susan Scott (University of Southern Mississippi)**

[42] *Domestic and ritual meals in the Moundville Chiefdom: Patterns of plant and animal use at the Moundville Center and its outlying communities*

The zooarchaeological and archaeobotanical datasets accumulated by thirty years of modern research in the Black Warrior Valley provide a nearly unparalleled opportunity to examine similarities and differences in food use between elite and non-elite households, between Moundville and its hinterlands, and between several ritual contexts. The data suggest that different social and behavioral (ritual versus domestic) roles are expressed in the composition of

faunal assemblages, yet are not so clearly marked by associated plant remains. Integrating zooarchaeological and archaeobotanical information provides a more nuanced understanding of these two components of daily fare and ceremonial feasting.

**Jackson, H. Edwin [56]** *see Kowalski, Jessica A.*

**Jackson, Sarah (University of Cincinnati) and Joshua Wright (Stanford University)**

[126] *Monumental Meanings: Reflections on Space and Place in Central America and Inner Asia*  
Monuments are enduring materializations of power and social organization that both punctuate the physical landscape of past societies and also represent an experiential landscape of knowledge and power, legible to those who inhabited it. We examine two radically different monumental traditions – in the Classic-era Maya world and Bronze Age Inner Asia – in order to explore the ways in which free-standing monuments played roles, even as agents in their own right, in the communication, articulation and reinforcement of spatial and social organization. We pay particular attention to the use of monuments as an alternative type of architectural space.

**Jacobucci, Susan (Andrew Fiske Memorial Center for Archaeological Research, UMass Boston)**

[173] *A Long History of Land and Resource Management Techniques as Documented by Pollen Grains and Charcoal Particles Recovered from the Eastern Pequot Tribal Nation Reservation*  
The Eastern Pequot Reservation located in northeastern Connecticut provides an opportunity to examine the Pequot's history of land and resource management practices. This study includes a pollen and charcoal analysis of a sediment core recovered from the reservation and collaborative discussions regarding final interpretations and written representations. Continuous climatic disturbances and human land practices influencing vegetation on the landscape for approximately 9,000 years are chronicled with attention paid to the period surrounding the establishment of the reservation. The Eastern Pequot preserved their land management techniques during much of the reservation period by employing variations to them as they negotiated colonialism.

**Jadin, Ivan [130]** *see Golitko, Mark L.*

**Jahnke, Lori**

[60] *Biological Variation from the Middle Horizon through the Late Intermediate Period at Luriama, Huaura Valley, Peru*

Luriama is a complex multicomponent site in the lower Huaura Valley that was occupied from the Middle Horizon through the Late Intermediate Period (LIP) and possibly into the Late Horizon. The site is surrounded by numerous cemeteries associated with various periods of occupation. This research considers patterns of biological variation among three of the cemeteries representing Middle Horizon and LIP occupations. Biological distance data are analyzed and interpreted within the context of central coast biological variation during the LIP. These data address the site history, as well as the place of Luriama within LIP interaction.

**Jaime-Riveron, Olaf (University of Kentucky) and Dolores Tenorio (Instituto de Investigaciones Nucleares)**

[91] *Ancient mines and quarries used by the Olmecs of Mesoamerica.*

In this presentation, I will show results of the location and provenance of minerals used by the Olmecs during the formative period of Mesoamerica. I will show the ancient exchange routes of greenstone (serpentine, jadeite, gneiss, schist, green quartz, etc), iron ores (hematite, magnetite, ilmenite) and igneous rocks (basalt and andesite). My approach is from anthropological and geoarchaeological perspective in order to address the Olmecs issues from a more scientific view.

**Jaime-Riveron, Olaf [148]** *see Espinosa, Guadalupe M.*

**Jakaitis, Edward [85]** *see Creamer, Winifred*

**James, William (Chemical Characterization Laboratory, TAMU), Suzanne Eckert (Texas A&M University) and William James (Elemental Analysis Laboratory Texas A&M University)**

[147] *Clay Procurement Practices on Tutuila Island, American Samoa during the Ancestral Polynesian Period*

Approximately 2000 years ago, residents of coastal villages on Tutuila Island produced and used ceramic vessels as part of their subsistence practice. Recently, numerous ceramic-bearing sites

dating to the same period have been discovered in the Tutuila highlands. This project uses LA-ICP-MS to characterize wild clays collected from both highland and coastal areas. Comparison of these clays to ceramic artifacts will provide insights into the spatial extent of clay procurement practices as well as clues as to whether or not highland sites were residential in nature.

**James, William [147]** see *James, William D.*

**Jamieson, Susan (Trent University)**

[116] *Socio-political Complexity in Mid-seventeenth Century Southern Ontario*

Although there are unresolved debates about the degree of socio-political complexity among mid-seventeenth century Iroquoian speakers of southern Ontario's Great Lakes lowlands region, archaeologists generally assume relatively decentralized systems. However, our focus on inferred Northern Iroquoian homogeneity and widespread misunderstandings of such concepts as 'egalitarian', 'hierarchy', and 'rank' have caused us to ask wrong questions of the archaeological record. I conclude that evidence for intensified group ritual and economic behaviors, which reflect networks of social obligation and agencies of culture change, are indicative of varying degrees of political centralization in this region.

**Jansen, Susie [67]** see *Williams, Joel C.*

**Janusek, John (Vanderbilt University)**

[81] *Becoming Tiwanaku: Past, place, and personhood in the creation of Tiwanaku identity*

Tiwanaku's profound social diversity implies that the construction of a common identity was a critical and ongoing process. In this paper, I address some spatial and temporal parameters of the emergence of the Tiwanaku phenomenon, emphasizing specific patterns of continuity and change in the Formative to Tiwanaku phase transition. I discuss the crystallization of particular notions of place, the past, and their roles in the formulation of a Tiwanaku person, as fundamental to the rise of this influential formation.

**Jefferies, Richard (University of Kentucky) and Christopher Moore (University of Kentucky)**

[53] *Spanish-Guale Interaction at Mission San Joseph de Sapala*

Seventeenth century Spanish mission efforts along the Georgia coast resulted in a period of sustained contact between the Spanish and the Guale Indians. Conflict with the English and their Native American allies resulted in the retreat of mainland mission towns to the Georgia Sea Islands. By 1684, residents of at least four of these formerly independent towns had retreated to Sapelo Island where they settled near the Guale town of Sapala. Recent identification and archaeological testing of the probable site of Sapala and its associated mission of San Joseph de Sapala provided important data on Spanish-Guale contact and interaction on Sapelo Island.

**Jeffries, Tim [147]** see *Shepardson, Britton L.*

**Jenevin, Steve [47]** see *Davis, Loren G.*

**Jenks, Clifford M. [90]** see *Pepe, James P.*

**Jennings, Justin [45]** see *Kellner, Corina M.*

**Jennings, Thomas (Texas A&M University) and Michael R. Waters (Center for the Study of the First Americans, Texas A&M University)**

[190] *The Paleoindian Sequence at the Buttermilk Creek Site*

The Buttermilk Creek Site (41BL1239) is a multicomponent site located in Bell County, Texas. Paleoindian components identified thus far include Angostura, Golondrina/Barber, Dalton, Folsom, Clovis, and possibly pre-Clovis. Focusing on point typology, this paper presents the stratigraphic sequence of diagnostic points. The distribution of points, when compared with luminescence dates, will refine our understanding of Paleoindian occupation at the site.

**Jensen, Anne (UIC Science LLC)**

[146] *North Alaskan Culture History Revised: Evidence from the Nuvuk Archaeological Project*

Until a few years ago, Nuvuk was considered a mere Late Precontact to Recent Inupiaq site. Recent excavations extended the chronology back to early Western Thule. The 2008 field season extends the chronology back to the 4th century AD, and adds a new culture, never before recorded on the Arctic Coastal Plain, to the previously known culture history of the site.

**Jerardino, Antonieta (University of Cape Town)**

[165] *Large shell middens along the West Coast of South Africa: changes in settlement, diet and hunter-gatherer resource intensification*

Several large shell middens along the west coast of South Africa are located in the Elands Bay and Lambertsbay areas. These "megamiddens" date between 3000 to 2000 BP. Raising population densities, increasing residential permanence and circumscription of mobility are some of the causes and consequences behind their formation. A productive environment accommodated these changes initially, but signs of local impact on marine fauna were evident later on. Re-formulation of subsistence strategies (intensification) and increase in ritual were developed as coping mechanisms. Isotopic evidence from human skeletons shows that most of the protein consumed during this millennium derived from marine resources.

[165] *First Chair* [165] *Third Organizer*

**Jessup, Nicole (University of Calgary) and Nicole Jessup**

[101] *Animistic Iconography and Representation in Pacific Nicaragua*

This poster presents an iconographic classification of animal imagery in ceramic, architecture, monumental carved stone statuary, and other pre-Columbian forms of material culture from Pacific Nicaragua, with a focus on materials collected in 2000-2005 excavations at the site of Santa Isabel. The objective of this analysis is to garner insight into the emic perspective of indigenous worldview, particularly as it may relate to questions of animism. As a cultural boundary, the material culture of Pacific Nicaragua reflects a contested landscape, and the iconography and ideology are key components to evaluating the relationship between and across these frontiers.

Jessup, Nicole [101] *see Jessup, Nicole R*

**Jett, Stephen (Univ. of Calif., Davis)**

[129] *Pre-Columbian Archaeological Specimens Of Cultivated Plants And Domesticated Birds Found Outside Of Their Hemispheres Of Origin*

Most domesticated species cannot travel across oceans on their own or even survive without human care. It is widely assumed that there were no pre-1492 human-instigated transfers of domesticates between the hemispheres. However, Pre-Columbian archaeological specimens of twelve American crop plants and the turkey are reported from professionally excavated archaeological sites in Eurasia, and specimens, chemical residues, or genes of a minimum of five Eurasian cultivated plants plus the Asiatic chicken have been reported from such sites in the New World. Many are attested in the hemisphere opposite to that of their origin one to four millennia B.C., indicating impressively early transoceanic human transfers.

**Jiang, Leping (Zhejiang Institute of Archaeology, China) and Liye Xie (University of Arizona)**

[145] *Shangshan: the Oldest Open-air Sedentary Village in South China*

The recently discovered Shangshan site is widely regarded as the oldest (ca. 11,400-8600BP) open-air sedentary village with probable domesticated rice in south China. Shangshan has yielded evidence of a variety of dwelling styles including pile-dwellings. Rice husks derived from morphologically domesticated grains were used as pottery temper. The lithic industry reflects a transition from Paleolithic to Neolithic technologies. The Shangshan site has yielded abundant information for studying new adaptation strategies during the early Holocene in the lower Yangzi drainage and foreshows cultural elements that were further developed in later cultures such as Kuahuqiao and Hemudu in the same region.

**Jiao, Tianlong**

[62] *Contextualizing Liangzhu artifacts in the Dawenkou area, eastern China*

The discovery of Liangzhu artifacts in the Dawenkou culture area has generated debates on their implications. Some argue that they represented the Liangzhu population expansion or colonization to the north, while others maintain they were just exchanged commodities or gifts. By analyzing the contexts of the Liangzhu artifacts in the Dawenkou communities, this presentation explores the dynamic interactions between different groups in Neolithic Eastern China.

**Johannesson, Erik (UNC Chapel Hill) and Michelle Machicek (University of Sheffield)**

[63] *Going Xiongnu: Landscapes, Political Change, and Mortuary Practice Among Iron Age Pastoralists in Mongolia*

The Mongolian Bronze-Iron Age transition is characterized by the sudden appearance of a new



set of material culture regimes and burial practices which spread rapidly across the steppes as part of large-scale socio-political change. Here we engage how political centralization manifests archaeologically through an examination of mortuary landscapes and funerary remains at Baga Gazaryn Chuluu in the north Gobi Desert of Mongolia. We employ a multi-dimensional landscape perspective which incorporates mortuary monuments, the funerary rituals used in their construction, and the environmental setting in which they are placed to argue for an emergent "Xiongnu" socio-political movement during this period.

**Johansen, Trine Bjorneboe (University of California, Davis)**

[146] *Little Auks at Iita, Northwest Greenland: Strength in Numbers*

Faunal material from Iita (Etah), Northwest Greenland is used to explore the importance of little auks (*Alle alle*) as a reliable food source in the diet of Polar Inughuit through time. Applications of prey choice models often use body size as a proxy for resource rank when addressing diet breadth. However, what happens to the rank of a little auk when captured en masse? How does diet breadth change when technologies used to capture large-bodied animals are lost and when traditional family structures are displaced by Euro-American expeditions in the mid- to late 1800s? Zooarchaeological analysis addresses these questions.

**Johnson, James (University of Pittsburgh)**

[16] *Between settled and mobile: Destinations and localities in early Iron Age Ukraine*

Settlements are often regarded as fixed points in the physical landscape, indicative of static reflections of social organization. Utilizing recent approaches to movement and scale in archaeology, including Geographic Information Systems (GIS), I suggest that location choices for open settlements acted as dual strategies as centers for human exploitative activities in localities, while channeling the movement of material goods, animals and people through regional landscapes. This study tests previously suggested core-periphery models of extraction and exchange activities in the development of early Iron Age agro-pastoralist communities in the Ukrainian forest-steppe.

**Johnson, Kent (Arizona State University)**

[78] *Evaluating Models of Biocultural Change at Semna South, Sudan during the Meroitic - post-Meroitic Transition*

Published biodistance data from Semna South, Sudan suggest population continuity between the Meroitic and post-Meroitic periods, while archaeological data from the site indicate population replacement. The present study evaluates models of biocultural change by analyzing odontometric data using biodistance analyses that model microevolutionary processes. Results of Lande's test exclude genetic drift as the microevolutionary mechanism responsible for phenetic differences between the samples, while Relethford-Blangero results indicate extralocal gene flow during the post-Meroitic period. The integration of multiple lines of evidence suggests a complex population history in which Nubian ethnogenesis was largely a local process along with extralocal genetic input.

**Johnson, Phillip (Am. Samoa Power Authority) and Phillip Johnson (Texas A&M University)**

[147] *Residence and Activity in Upland Tutuila: A Landscape Approach Towards Understanding Social Organization in Samoa*

It is clear that Samoan's have exploited the interior uplands on the Island of Tutuila for at least the last 2000 years. However during the Recent Period (1000-250 BP) there is a marked shift in the upland settlement and activity on Tutuila. The upland expansion and exploitation at this time presents an ideal opportunity for the investigation of social organization and the transition from ranked to stratified chiefdoms in Samoa. This poster will present recent applications of landscape approaches and spatial analysis of precontact upland settlement and activity on Tutuila towards an understanding of emerging social complexity in Samoan Chiefdoms.

[147] *First Chair*

**Johnson, Phillip [147] see Currey, Timothy P.; [147] see Johnson, Phillip R.**

**Johnson, Scott (67580755) and Grant McCall (Tulane University)**

[77] *An Experimental Examination of the Effectiveness of Fire-Hardened Spear Technology*

The anecdotal use of fire-hardened spears has been cited frequently in the archaeological literature. Although a few examples have been recovered, no experimental examination of these tools has been undertaken. This paper presents an experimental examination of fire-hardening as a manufacturing technique. Our results show that fire treating (1) significantly hardens the surface

of spears, (2) may have decreased tip depression on impact, and (3) does not significantly improve penetration. The performance of wooden-tipped spears is also compared to stone-tipped spears, and the functional advantages of stone points are considered.

**Johnson, Trevor [53]** *see Lindner, Christopher*

**Johnson, William and Bernard Means**

[52] *Reexamining the Massawomeck-Monongahela Connection*

John Smith's account of the founding of Jamestown refers to the mysterious Massawomeck. Smith's early writings indicate he had learned that the Massawomeck were powerful enemies of the Powhatan chiefdom as well as of the Susquehannocks. Other than fleeting references, the historic record associated with early European colonization provides us with little information on the Massawomeck, particularly the tantalizing question regarding their cultural identity. This presentation draws upon on-going archaeological research and cartographic and historic documentation to argue that the Massawomeck included the Protohistoric Monongahela and Wellsburg people of the lower Upper Ohio Valley.

**Johnston, Kevin [150]** *see Berman, Mary Jane*

**Jolie, Edward (University of New Mexico) and Laurie Webster (University of Arizona)**

[66] *Reconstructing the Organization of Chacoan Perishable Artifact Production*

Perishable industries based on plant and animal products comprised an integral component of Ancestral Puebloan lifeways. However, despite their great antiquity and clear significance, little attention has been paid to the role of perishable artifacts in Pueblo peoples' day-to-day lives during Chacoan times (A.D. 850-1140). Here we summarize archaeological evidence from existing Chaco museum collections for the production of three distinct but interrelated perishable artifact classes: baskets, sandals and textiles. We further examine the archaeological data in light of Southwestern ethnographic and cross-cultural accounts to generate working hypotheses about the organization of production of these crafts across the Chaco System.

**Jones, Brian (UMass, Amherst)**

[116] *A Social Network Analysis Approach to Understanding Native Social-Economic Organization*

Archaeologists in the Northeast still debate the nature of pre-contact social-economic organization. Better understanding the structure and consequences of such networked systems is fundamental to interpreting the archaeological record. Utilizing a Social Network Analysis approach, this paper examines modeled social structures based on varying exchange and kinship organizations. The topology of social networks results in consequential differences in the efficiency of information flow and the robusticity of networks in the face of failures. Specifically, social organization will affect the effectiveness of resource monitoring and the trajectory and extent of epidemic disease through a population.

[116] *First Chair [116] Second Organizer*

**Jones, Douglas [46]** *see Quitmyer, Ivry*

**Jones, Emily (Utah State University)**

[18] *Cultural diversity, niche partitioning, and Diné ethnogenesis in the protohistoric Southwest*

The Colorado Plateau has been the site of a remarkable diversity of subsistence adaptations over the past 5000 years: farmers, pastoralists, and hunter-gatherers have all made this region their home. This poster looks at ethnic diversity and subsistence adaptations on the Colorado Plateau in the protohistoric period, particularly as they relate to the question of Navajo origins.

**Jones, George T. [44]** *see Beck, Charlotte*

**Jones, John [83]** *see Dunning, Nicholas P.*; [150] *see Benz, Emily J.*; [164] *see Nott, BreAnne M.*

**Jones, John G. [58]** *see Quach, Tony T.*; [99] *see Casile, Claudette A.*

**Jones, Kevin (University of Arizona), Fred Andrus (University of Alabama), Greg Hodgins (NSF-Arizona AMS Facility) and Miguel Etayo-Cadauid (University of Alabama)**

[130] *Marine radiocarbon dating in a variable upwelling environment*

Marine mollusk shells and artifacts made from these shells can be used to date coastal

archaeological sites. Radiocarbon dating of this marine material requires knowledge of the marine reservoir age,  $R$ . In the global ocean,  $R$  averages 400 yr, but its value changes geographically and temporally. Based on series of small-sample AMS radiocarbon dates from individual Peruvian clam and scallop shells,  $R$  varies seasonally in Peru by over 500 yr, potentially introducing a multi-century inaccuracy to local marine radiocarbon dates. We discuss strategies for sampling and data interpretation to reduce this inaccuracy in a variable-upwelling environment.

**Jones, Robert (University of Arizona)**

[61] *Long Walks, New Neighbors and Old Ways: Evidence of Diaspora in the 14th Century Southwest*

In the late 13th century, Ancestral Puebloan migrants from northeastern Arizona joined local populations along the Upper Gila and its tributaries to form new communities during a time of demographic upheaval. Recent research on this migration and its aftermath suggests that northern migrants maintained aspects of a shared identity despite dispersal throughout existing communities, a hallmark of diaspora. Using the ethnography of diaspora, I argue that the maintenance of post-migration social connections produces novel material culture configurations visible in the archaeological record. The material evidence for a diasporic community in the southern Southwest is evaluated in relation to ethnographic models.

**Jones, Robert [18]** see Hill, Brett

**Jordan, Janet [163]** see Trunzo, Jennifer M.

**Jordan, Leah (Washington State University), Brian Kemp (Washington State University), Colin Grier (Washington State University) and Gary Thorgaard (Washington State University)**

[118] *Millimeters and Base Pairs: Do Transverse Diameter and DNA Tell the Same Story*

Salmon have long been an important species to populations in the Northwest. In reconstructing the composition of ancient fisheries in the region, identifying salmon remains to the species level is desirable, but unobtainable solely through morphometric means. We have developed a method for species identification using a 189 base pair fragment in the 12S region of the mitochondrial genome. All of the native Salmonidae species of the Northwest can be uniquely identified using this method. Archaeological specimens from the Dionisio Point site, presumed to be those of salmon, were evaluated for the effectiveness of transverse diameter measures for species identification.

**Jordan, Peter (School of Geosciences, University of Aberdeen)**

[167] *A Eurasian Perspective on the Neolithization of Cultural Landscapes*

The aim of this paper is to broaden analysis of the 'Neolithization' of cultural landscapes in East Asia by deploying comparative perspectives from Northwestern Europe. In the latter region the Neolithic – and Neolithization – has traditionally been linked to the dispersal of agriculture, settled villages and pottery into northern Europe, either by colonizing farming populations or indigenous adoption by local hunter-gatherers. Decades of research and debate have generated a useful range of models, methods and theoretical perspectives that will be of considerable analytical utility to scholars examining analogous Neolithic cultural transformations around East Asia's inland seas.

[167] *Third Organizer*

**Jordan, Peter [167]** see Uchiyama, Junzo

**Jorgensen, Mia (University at Buffalo)**

[181] *Plaza One Reborn: Cuanalan and Tezoyuca Rising*

In the valley of Teotihuacan rests the mystery of Plaza One- one of the earliest sections of an ancient city poised on the brink of inception. In the remnants of what was are the findings of what would be. And what would become is explored through a reanalysis of the ceramics excavated from René Millon's 1959 excavation of Plaza One within the city of Teotihuacan located in present day San Juan Mexico. Preliminary findings indicate a rising count of Cuanalan and Tezoyuca ceramics from the large assortment of Tzacualli shards uncovered from the site adding to the mystery of Plaza One.

[181] see Barbour, Warren T D

**Joseph, J (New South Associates)**

[172] *Translating Project Management: Observations and Recommendations from the PO-29 Project*

Archaeological investigations of Site PO-29 began with data recovery excavations in June of 2007 and concluded with the site's preservation a year later. Clearly, this project did not follow the normal path of CRM archaeology. Along the way, the project also generated controversy over the application of territorial versus federal historic preservation laws, methods, the roles of various archaeological organizations in Puerto Rico, the curation of federal collections, and the communication of project results. This paper examines the management of this site in the context of Puerto Rican archaeology and provides recommendations for future CRM projects on the island.

**Joyce, Rosemary (University California Berkeley)** [13] *Discussant* [117] *Discussant*

**Judge, Christopher (Univ. of SC Lancaster), Carl Steen (Diachronic Research Foundation) and Sean Taylor (SC Heritage Trust Program)**

[14] *Native Americans on The Great Pee Dee River 1500-2000 AD*

Spanish explorers were in SC in the 16th century, but only impacted the people of the Pee Dee indirectly. More compelling was the pressure that arrived from the North, where British and French traders were opening up new territories, and causing increasing conflict. By 1700 the Sara had moved south from Virginia and settled at the NC – SC border. Undocumented groups also arrived, and at least two individuals were left behind at the Johannes Kolb site. This paper will discuss these individuals and introduce the audience to the Native American people of the Pee Dee between 1500 and 2000 AD.

**Justeson, John (University at Albany)**

[187] *Potent agency and discourse patterns in epi-Olmec texts*

Work in linguistic anthropology on the relation between language and cognition indicates that the ways that people regularly talk about the world affect, and are affected by, the ways they regularly think about it. Among the most consequential features of discourse are grammatical distinctions that correlate with semantic properties; when these properties relate to social roles or values, discourse patterns can have cultural significance. Agency in particular has been cogently addressed through discourse analysis. This paper explores the relation between morphology and agency in the epi-Olmec language, and how agency is tacitly engaged through grammatical features in epi-Olmec texts.

**Juwayeyi, Yusuf (Long Island University)**

[107] *Identifying The Location of the Capital of the Maravi Kingdom Using Oral Traditions and Archaeology*

Until now, the only sources for what has been written about the proto-historic kingdom of the Maravi have been based on oral traditions and a few scattered records of 17th century Portuguese explorers. Oral traditions suggest that the capital of the kingdom was either at Mankhamba or at Manthimba. While Manthimba has yet to be located, preliminary archaeological results at Mankhamba suggest that the site was important but not necessarily the kingdom's capital. Research in both oral traditions and archaeology must therefore continue.

**Kabata, Shigeru** [38] *see Sugiyama, Saburo*

**Kabotie, Michael ( Second Mesa, Hopi Tribe)**

[112] *Utí and Utihii: Fear and the Sacred*

I listen to what archaeologists say with the ears of one initiated into Hopi religious traditions. I look for parallels, and how past knowledge is embedded in Hopi and other cultural traditions. My core premise is the universal emotion of fear—Uti in Hopi—and how the Hopi initiations lead one to transform it into Utihii—the sacred. We all share fear, but react and respond in different ways. Archaeology helps me see contradictions in life and religion that we share. In a metaphorical sense, I make art my ritual practice --visual prayers to promote healing, understanding, and respect.

**Kador, Thomas** [91] *see Cooney, Gabriel*

**Kaiser, Timothy** [67] *see Forenbaher, Staso*

**Kakos, Peter (Navajo Nation-HPD)**

[4] *The Fertility Zone: Body Fat, Hormonal Responses, and the Effects on Population Growth*  
Current demographic models continue to assume that high human fertility rates are a universal and persistent constant in any calculation for explaining and predicting population growth which gave impetus to the rise of civilization. The paper examines this assumption and offers a new set of ideas that contradicts previous models. It is now established that physiological responses to certain macronutrients or food packages, including high glycemic foods, affect hormonal responses and ultimately the storage of body fat. It will be argued that it is the storage of body fat which stimulates female ovulation and promotes fertility. This underlying proximate cause and effect of human fertility explains why human populations expand when they do, and under what conditions.

**Kalis, A. J. [138]** *see Stobbe, Astrid*

**Kalosky, Ethan (University of New Mexico) and Keith Prufer (University of New Mexico)**

[99] *Uxbenka Settlement Survey: Mapping Architecture in the Eastern Periphery of the Maya Lowlands*

This poster presents initial results of settlement studies at Uxbenka, and the application of new high precision GPS technology to survey methodologies. Uxbenka is the earliest inhabited and longest occupied Maya polity in southern Belize. Preliminary data suggest residential structures were confined to hilltop locations, eschewing bottomlands. Additionally, settlements do not appear hierarchically organized surrounding the site core, but are dispersed across the landscape, with elite residential groups located >1 km out. Survey utilizing new GPS technologies allowed rapid acquisition of landscape and architectural data. These data suggest resource availability, rather than proximity to site core, guided elite settlement strategies.

**Kamiya, Masahiro (masakamiya)**

[128] *Toward Modeling Pre-Columbian Distribution of Geophytes: Camas in South-Central and Eastern North America*

Ethnographic, ethnohistoric, and archaeological evidence suggest that camas (*Camassia* spp.) was an important food resource across North America. Several species of camas grow across the continent all with a preferred habitat of poorly drained, fine-grain sediment. An ecological model based on climatic data and modern distribution of camas in Texas illustrates the probability of the presence of camas in south central North America. The projection is tested against the modern distribution of camas in adjacent states. Prehistoric distribution of camas is projected based on paleoclimatic data and tested against archaeological sites with charred camas bulbs in Texas.

**Kamp, Kathryn [50]** *see Whittaker, John C.*

**Kamp-Whittaker, April (University of Denver)**

[174] *Maintenance of Childhood in Amache, a WWII Japanese American Internment Camp*  
Using archaeology, oral history, and archival sources this poster will explore the continuation of family life, alteration of the physical landscape, and involvement in mainstream American culture of Japanese American children interned at the Amache Camp.

**Kanegae, Kenji [2]** *see Murano, Masakage*

**Kanno, Tomonori (Graduate School/Faculty of Arts and Letters)**

[165] *Changes through time in size and intra-site spatial patterns of Jomon shellmiddens*

This paper examines changes through time in size and intra-site spatial patterns of Jomon shell-middens in Tohoku, Japan. The focus of my research is to reconstruct the communal labor system. The number of Initial and Early Jomon shell-middens is small. By the Middle Jomon period, the number increased significantly, and it stayed steady through the Late and Final Jomon periods. Middle Jomon shell-middens are large and ring-shaped. Final Jomon shell-middens have thicker accumulation of shells, but they tend to consist of multiple smaller middens. These indicate that the shell processing system shifted from the larger communal labor to family-based one.

**Kansa, Eric [134]** *see Kansa, Sarah W.*

**Kansa, Sarah (The Alexandria Archive Institute) and Eric Kansa (UC Berkeley)**

[134] *Yes, it is all about you: User Needs, Archaeology and Digital Data*

This paper presents preliminary findings from an NEH-funded study exploring how open

technologies can best meet the needs of diverse communities of scholars working with cultural heritage content. Web-based technologies have the potential to make research content freely accessible and easier to use. However, they have limited impact on scholarship if they do not account for human and social factors, such as work-flow patterns, incentives and reward structures, and collaborative processes. Understanding the "user experience" is essential to the successful development of systems to enhance humanities research. Initial findings reflect experiences shared by academic researchers, heritage managers and specialist communities.

[134] *First Chair*

**Kantner, John (School for Adv. Research) [40] Discussant [66] Discussant**

**Kantner, John [161] see Vaughn, Kevin J**

**Kantor, Loni (Arizona State University) and Ben Nelson (Arizona State University)**

[132] *The Archaeological Potential of a Huichol Landscape, Jalisco, Mexico*

Socially significant components of a landscape are often designated with placenames. Examining named places within an ethnographic setting is thus one means to assess the nature and scope of a people's landscape. Here I identify characteristics of a Huichol landscape that can serve as ethnographic source data for evaluating the archaeological record. I analyze the cultural and physical properties of named places from data I collected during fieldwork in the Sierra Huichol. Results reveal surprising similarities to placenames and landscape features of other sites in Mesoamerica. This redundancy underscores the potential for archaeological applications of knowledge from the Huichol landscape.

[132] *First Chair*

**Kaplan, Jeremiah (New South Associates)**

[172] *House Patterns at Site PO-29: Preliminary Interpretations*

This presentation will focus on pre-contact, Taino structural patterns, identified during phase III investigations at the site PO-29 located on the Portuguese River, North of Ponce, Puerto Rico. These structural patterns are identifiable through sub-surface features which were identified through hand excavations as well as machine assisted scraping. There are over 122 possible post holes and associated features discovered at this site. These features have been extensively mapped and documented and structural patterns have been identified from preliminary as well as ongoing analysis of this feature data. I plan to provide a brief overview of the type and number of structures identified during this project, focusing on the spatial arrangements of house patterns. This will be done by power point presentation and will include maps, photographs, feature drawings and profiles. This is a complexly organized site and significantly increases our knowledge of the settlement patterns and house structures during the pre-contact, Taino period in Southern Puerto Rico.

**Karabowicz, Amy (Arizona State University)**

[99] *Wattle and Daub Architecture at Calixtlahuaca, Mexico: Experimental Analyses and a Comparative Study with Europe*

My project investigates the structural components of wattle and daub architecture. The recovery of an unexpected 0.5 metric tons of burned daub from the Postclassic site of Calixtlahuaca, Mexico (an excavation directed by Dr. Michael E. Smith, Arizona State University) prompted an investigation of the social, environmental, and economic context of this material. I describe a morphological study, laboratory tests, and ethnographic and ethnohistoric research. The result is a deeper insight into wattle and daub architecture in Central Mexico and the attributes it shares with the European tradition.

**Kardulias, P. Nick [145] see Arculeo, Jenna N.; [174] see Rancour, Brittany C.**

**Kardulias, Paul (College of Wooster)**

[63] *Extraction Zones in Prehistoric and Historic Landscapes on Cyprus*

Among the multiple dimensions of landscapes, scholars have generally emphasized those aspects reflecting long-term occupation, especially those with evidence of residence or ritual activity. However, certain areas of considerable economic importance have left few vestiges of built features, yet served key roles in resource procurement. This study explores such extraction zones on Cyprus from the Aceramic Neolithic to the modern period, with a focus on chert quarries and use of fields for pastoral activities. The project area is in the Malloura Valley, a location intermediate between the densely occupied south coast and the agriculturally fertile Mesaoria plain in the interior.

**Karwoski, Colleen [29]** *see Amick, Daniel S.*

**Kashyap, Arunima [39]** *see Weber, Steve*

**Kasper, Kimberly (University of Massachusetts-Amherst) and Kevin McBride (Mashantucket Pequot Research Center and Museum)**

[173] *Resituating Agency: Negotiations between Native Peoples and Plants on the Mashantucket Pequot Reservation*

After European contact, human choice within Native American communities is often disregarded and considered determined by ecological and colonial factors. Material residues of people-vegetation interactions (seeds, wood charcoal, and other plant materials) will be explored at the Mashantucket Pequot Reservation during the Contact and Historic periods. Plant remains within archaeological sites on the Reservation are seen as active products and reflections of Mashantucket choices and engagements with a negotiated landscape. This collaborative investigation between the Mashantucket community, archaeologists, and ecologists, turns our attention to how different cultures, challenged by colonization, conceptualize their socio-natural world.

[173] *First Chair*

**Katseanes, Chelsea [100]** *see Coronel, Eric*

**Katz, Paul (PRIAM)**

[91] *Formal Extraction Sites on the High Plains of North America*

This paper will contribute to the development of an international inventory of prehistoric mines and quarries by summarizing the sites in a specific region of the United States. A variety of materials will be considered, although all will have in common some formal extraction methodology. On the High Plains, this is usually limited to the excavation of subsurface pits. Particular attention will be paid to the extraction of Alibates silicified dolomite from the Texas Panhandle.

**Kavountzis, Erol (University of Florida)**

[182] *Evaluating cave use through spatial analysis of animal remains from Maya caves in Guatemala and Belize.*

Scholars have suggested that caves in the Maya region were used for ritual and represent connections to the underworld. Recent studies use spatial analysis and GIS of artifact distributions to understand the role of spatial cognition in Maya ritual cave use. These studies have suggested a variety of cave ritual functions and several cognized spatial divisions within caves including high-low, light-dark, and a more complex ritual pathway based on the Maya worldview. This zooarchaeological study will test these several models using GIS to explore the distribution of animal remains within multiple cave sites in Belize and Guatemala.

[185] *see Hageman, Jon*

**Kay Wesp, Julie [38]** *see Pereira, Gregory*

**Keeler, Dustin (University at Buffalo)**

[143] *Paris Basin Magdalenian Sites: a comparison of small-scale studies*

In this paper I will compare several contemporaneous, multiple occupation sites within the Paris Basin. Using the results of a variety of analyses it is possible to examine similarities and differences in the re-use of these short term occupation sites through detailed small-scale studies.

**Keeler, Dustin [145]** *see Korosec, Gregory J.*

**Keeley, Lawrence [130]** *see Golitko, Mark L.*

**Keim, Barry [26]** *see Evans, Amanda M.*

**Keller, Angela (University of California, Riverside)**

[36] *Crafting Power: Preclassic Shell Working in the Eastern Maya Lowlands*

Recent research in the eastern Maya Lowlands suggests that marine shell working was much more widespread in the Preclassic period than previously thought. Rather than a specialized activity centered on a few production sites, shell working appears to have been a common, albeit

small-scale, activity at many centers. This paper will synthesize recent analytical work in the region to suggest that emerging elites in the Preclassic period were directly involved in shell craft work, most likely as a means to build prestige through the creation and distribution of prestige goods.

**Keller, Angela [174]** *see Woodson, Mark*

**Kellner, Corina (Corina M. Kellner), Justin Jennings (Royal Ontario Museum) and Willy Yeppez Alvarez**

[45] *Tales from the Crypt: Understanding Wari through the Tombs of Tenahaha*

During a time of wide-ranging Wari influence throughout the Andes, mourners buried hundreds of people at the site of Tenahaha in the Cotahuasi Valley. Our excavations of seven of these tombs have revealed not only a wealth of bioarchaeological data on the buried individuals, but also the funerary customs and other rituals that were associated with these tombs. By comparing our data to those collected from burials elsewhere, we gain a better understanding of how the people of the Cotahuasi Valley negotiated their relationships with each other and the Wari state during this tumultuous period.

**Kelly, John (Washington University) and James Brown (Northwestern University)**

[86] *Cahokia: The Processes and Principles of Creation of an Early Mississippian City*

As North America's only pre-Columbian city, Cahokia represents a unique configuration characterized some 50 years after the outset by four quadrilateral plazas centered around Monks Mound. This ritualized core of large earthen platform mounds, large constructed plazas, and massive wooden architecture comprises a landscape encompassing over 100 ha. This built environment is at the heart of this ritual city covering nearly 15 square kilometers and has its roots in the site's late Emergent Mississippian community. Our presentation is focused on the processes leading to the creation of this urban space and the American Indian principles that underlie its creation.

**Kelly, Katherine [179]** *see Vargo, Barbara A.*

**Kelly, Lucretia [53]** *see Belknap, Lori*

**Kelly, Sophia (Arizona State University), Christopher Watkins (Arizona State University), David Abbott (Arizona State University) and Gordon Moore (Arizona State University)**

[110] *Technological Choices Related to Sand Temper Selection in Perry Mesa Plainware Pottery*

During the 14th century, a series of large villages were occupied on Perry Mesa and other upland areas in central Arizona. Petrographic and microprobe analyses of Perry Mesa plainwares indicate that potters selected granitic sands and schist to temper their pottery instead of locally available basaltic sands. The structural characteristics of granite and schist sands, such as their hardness and angularity, may be one reason why these materials were preferred as tempering agents. Our results imply that Perry Mesa potters carefully controlled the physical components of their plainware pottery instead of relying on the closest available materials.

**Kemp, Brian (Washington State University), Cara Monroe (University of California-Santa Barbara and Washington State University), RG Matson (University of British Columbia) and William Lipe (Washington State University)**

[164] *Genetic Analysis of Basketmaker II Coprolites from the Turkey Pen Ruins Site in Southeastern Utah*

Ancient human coprolites (desiccated feces) are abundant in dry rock shelters of the American Southwest. For currently unknown reasons, DNA may be preserved in such coprolites for thousands of years. We report a preliminary study of mitochondrial DNA variation exhibited by a late Basketmaker II period population (1600-2100 ya) in southeastern Utah, as inferred from genetic analysis of coprolites recovered from the Turkey Pen Ruins' midden. These data allow assessment of possible ancestor-descendant relationships between Basketmaker II individuals and those from later archaeological cultures and present-day Native American communities in the Southwest.

**Kemp, Brian [18]** *see Wyatt, Scott D.;* [118] *see Jordan, Leah G.*

**Kemp, Brian M. [164]** *see Nott, BreAnne M.*

**Kemp, Leonard [53]** *see Mauldin, Raymond P.*



**Kempton, Karen (Wyoming Army National Guard) [51] *First Chair***

**Kendall, Bryan (University of Iowa)**

[138] *Stratigraphy of Human and Landscape Interaction at Bolores Rockshelter, Portugal*

The stratigraphy of Bolores rockshelter shows a pattern of human interaction with and modification of the landscape since the initial internment of human remains in the 3rd to 2nd millennia BC near present day Torres Vedras, Portugal. Prehistoric human activities include the removal of shale layers to create a burial surface and sandstone overhang. More recent agricultural activities including plowing and terracing have been responsible for the burial, preservation and eventual discovery of the site.

[53] see Reynolds, Cerisa R.

**Kennedy, James [18] see Randklev, Charles R.**

**Kennedy, Jason (Binghamton University, SUNY)**

[95] *Terminal Ubaid Period Organization of Labor and Commensality*

Recent scholarship has interpreted Terminal Ubaid period Coba bowls (expediently-produced, flint-scraped bowls) as precursors to Uruk period beveled-rim bowls (interpreted as ration containers for institutionalized dependent labor) that were used by emerging elites to mobilize surplus labor. I suggest that Coba bowls represent a means of labor in an alliance-based strategy focused on communal food consumption in exchange for labor. I contend that Coba bowls represent the archaeological remnants of a transformation in commensality and labor exchange evidenced in the shift from individual to communal consumption of food in the Late Chalcolithic 1 to 3 periods in northern Mesopotamia.

[95] *First Chair*

**Kennedy, Kenneth (Cornell University)**

[21] *To What Extent were Prehistoric South Asians Isolated from the Indian Mainland? Biotic and Archaeological Considerations*

When considering the degree of isolation of prehistoric Sri Lankan Homo sapiens from those occupying the Indian mainland, biological anthropologists, archaeologists, and geologists favor the opinion that island Sri Lanka was a unique geographical sector of the Indian subcontinent. Dating early human settlement of the island is considered with respect to the dispersion of humans, plants, and animals across the land bridges of the Palk Strait and Adam's Bridge. The conclusion is that the Sri Lankan prehistoric record provides overwhelming evidence that anatomically modern Homo sapiens of the island shared less genetic and cultural communication with mainland populations than assumed.

**Kennerty, Michael (University of Connecticut) and Donald Pinney (Jackson Co. School System)**

[88] *Incorporating Ecological Perspectives into an Archaeology Outreach Program*

The Georgia Museum of Natural History's Education and Outreach Program includes Science Box loans for grades K-8. The two-box Southeastern Native Americans series now emphasizes prehistoric foodways and people in the environment, providing students an ecological perspective with contributions from Plant Biology and Anthropology faculty at the University of Georgia. One box uses prehistoric material culture remains to explain archaeological methods, while the other box portrays Southeastern Native American culture from ethnographic and archaeological sources. The boxes contain multimedia pieces, printed works, reproduction lithic, pottery and faunal materials, archaeology activities, and a take-home search for indigenous foods in modern diets.

**Kennett, Douglas (University of Oregon), Kevin Cannariato (University of Southern California), Megan Walsh (University of Oregon), Patrick Bartlein (University of Oregon) and Yemane Asmerom (University of New Mexico)**

[83] *The Complex Role of Climate Change in Socioeconomic Integration and Fragmentation in the Southern Maya Lowlands*

Cyclical patterns of socioeconomic integration are punctuated by periodic societal fragmentation in the development of Classic Period polities in the southern Maya lowlands. An abrupt decrease in rainfall at the end of the Classic Period is argued to be one of several contributing factors in the broadscale demise of these interacting polities. In this paper we highlight the complex role of climatic change in the alternating process of societal fragmentation and reintegration fostering the emergence of increasingly complex socioeconomic structures. The historically contingencies of

landscape transformation and climate change associated with the Classic Period collapse are evaluated within this context.

**Kennett, Douglas J. [83]** *see Pruffer, Keith M.*; [99] *see Smith, Carley*; [92] *see Gomez, Josue A.*

**Kenoyer, Jonathan (University of Wisconsin)**

[39] *Harappan Iconography of the Unicorn: Origins and Legacy*

The Unicorn motif found on Harappan seals and some rare figurines has long been a controversial topic in the field of Indus studies. This paper will address some of the historical questions and interpretations of this enigmatic motif, as well as present new information resulting from excavations and surveys in Pakistan and India. The origin and changes in the iconography of the unicorn will also be presented, based on the chronological analysis of carved seals, sealings and terracotta figurines. Finally, the disappearance of the unicorn motif in South Asia and its long legacy outside the subcontinent will be examined.

**Kerns, Christopher**

[25] *For the Ferryman: Traversing the Neolithic waters of Liminal Space and Place*

Recently the idea of seascapes to compliment landscapes as part of the way archaeologists interpret evidence from the Neolithic period has been prevailed. This has led archaeologists to think about the belief in the spiritual and physical power of the sea, and how it could have related to the social interactions and their material manifestations. I am interested in how looking at the physical and spiritual power of the sea as Cooney (2003, 324) puts it "...provides a better understanding of how ships and sea travel, the acquisition of knowledge and material could be seen by people as floating in symbolic counterpoint to the ship as a vehicle of death, taking the occupants to another world." The aim of this paper is actually to establish that it is the fact that ships and sea travel requires specific knowledge and material that led to its association with death throughout the Atlantic Neolithic. In addition it is that boats traverse liminal spaces and inhabit liminal spaces that associated them with the transition/transformation from life to death. To do this I look at the practices and evidence from the Mesolithic/Neolithic transition, and how the concept of the liminal places such as islands and the coast as appropriate places for the deposition of the dead was established in the Mesolithic and continued into the Neolithic. From there I examine the ways in which overseas exchange networks separated those with knowledge of the construction and use of water craft from their communities. The axe trade was an important element of these overseas exchange networks and I look in more detail at the significance and association with death. It is then a logical step to look at how stone became associated with death, burials and ancestors. A lot of research has been done connecting stone with the water as well as with liminality, and I explore the implications of this association as related to water craft. To further develop the social, cultural and cosmological significance of water craft I draw in ethnographic evidence throughout the paper as supporting evidence, but it becomes extremely prevalent when looking at both the construction of boats as well as the transportation of megaliths. The conclusions from this evidence suggests that knowledge and use of watercraft was significant in the development in social structures during the Neolithic period.

**Kersel, Morag (University of Toronto)**

[113] *The ABCs of Archaeological Territoriality in Palestine*

Oslo II carved the Occupied Territories into a complex mosaic of areas – A, B and C. As part of the agreement, administrative control of the cultural heritage in Areas A and B will be assumed by the Palestinians. Area C is currently under Israeli military occupation. Within Area C, the site of Qumran provides a case study for examining the use of law in constructing archaeological territoriality. Which ideologies, rationales, and political forces lead to the construction of the artificial ABCs, which dominate the Palestinian archaeological landscape? Do those who control the past really control the future?

**Kiahtipes, Christopher (Washington State University), Dave N. Schmitt (Washington State University) and Karen Lupo (Washington State University)**

[145] *Seeing the Forest for the Foragers: Late Holocene Paleoenvironments in the Northern Congo Basin.*

Analyses of pollen and charcoal recovered from sediments collected in the Northern Congo Basin show changes in both rain forest diversity and composition spanning the last 2,632 +/- 39 C14 years ago until present. These data represent the first of their kind in this portion of the Congo Basin. These data present an opportunity to place the paleoenvironmental changes in the northern Congo Basin within a larger geographic context and evaluate the impacts of humans on local plant communities, but also yield valuable information concerning the impacts of European

colonization on this ecosystem and the foragers that depend on it.

**Kidder, Tristram (Washington University) [94]** *Discussant*

**Kieffer, C.L. [93]** *see Saldana, Melanie P.*

**Kieffer, Crystal L. (University of New Mexico) and Melanie Saldana (California State University, Los Angeles)**

[93] *Death in the Dark Zone: Preliminary Osteological Analysis of Midnight Terror Cave*

The 2008 field season at Midnight Terror Cave (MTC) focused on the recovery of human osteological material from areas considered to be at high risk of looting. Although only two areas received even moderately complete survey and collection, over 700 bones representing at least 23 individuals were recovered. The preliminary results suggest that MTC will produce the largest human skeletal assemblage recovered from a cave in the southern lowlands. Multiple contexts were encountered, including both single and multiple interments, as well as both primary and secondary interment. A tentative interpretation of the findings is advanced.

[115] *First Chair [115] Second Organizer*

**Kilikoglou, Vassilis [49]** *see Iñañez, Javier G.*

**Killgrove, Kristina (UNC Chapel Hill)**

[25] *What makes one Roman?*

The literary record provides a unified picture of what it was like to be Roman, but this picture only reflects the lives of the literate upper class. Revealing the lives of the lower class residents of Rome is still not a popular topic in Roman archaeology, and these individuals remain nameless, unromanticized by history. Skeletons from two Imperial period Roman cemeteries, however, challenge the notion that romanitas can be easily defined. Using stable isotope (C, N, and Sr) data from 52 individuals, this paper explores differences in lifestyle among males, females, children, and immigrants of the Roman lower classes.

[25] *First Chair*

**Killian, Becky (EM-Assist) and Amanda Anderson**

[88] *Virtual and 3-D Technologies: Innovative Approaches to Historic Preservation and Public Outreach*

Technology-based preservation solutions serve numerous practical applications in the historic preservation field, including research, mitigation, education, and public outreach. Virtual archaeology allows both professionals and the public to experience abstract concepts and ideas, visit inaccessible sites, and examine objects from diverse and unique perspectives. Interactive virtual recreations impart information regarding space and human experience, and are especially valuable when deployed over the web. This paper demonstrates how technologically oriented solutions provide unprecedented public access to cultural heritage resources and help bridge the gap between academic archaeology and society at large.

**Killick, David [168]** *see Molofsky, Lisa J.;* [145] *see Rosenstein, Dana D.*

**Kim, Jangsuk [167]** *see Kim, Jongil*

**Kim, Jongil (Seoul National University), Jangsuk Kim (Kyung Hee University, Korea) and Sangtaek Lim (Busan National University, Korea)**

[167] *The formation of symbolic landscape in the Korean Bronze Age-the role of enclosure-*

This article will examine the significance of enclosure which was constructed from the late phase of the Early Bronze Age to the Late Bronze Age in terms of symbolic landscape. In particular, how the existing landscape was reconstructed with the introduction of agriculture (Neolithisation) will be explored. For this work, An alternative perspective within phenomenological approach will also sought with a brief but critical review on related European Case.

**Kim, Nam (Univ. of Illinois at Chicago)**

[156] *Investigation of Fortification Features at Co Loa, Vietnam's Ancient Capital*

A recent collaborative investigation was undertaken by American and Vietnamese archaeologists at the site of Co Loa, Vietnam's ancient capital. The project sought to examine the conditions associated with the emergence of a state-level polity centered at Co Loa sometime during the second half of the first millennium BC. Specifically, excavations were focused on dating and understanding the site's monumental system of earthen ramparts, which would have required

significant political centralization for construction. Given ongoing debates regarding the cultural identity of the site's builders, project results will have broad implications for both Vietnamese history as well as state formation theories.

**Kimura, Birgitta (University of Florida)**

[145] *Ceramics from an excavation in Konso, Southern Ethiopia*

Pottery is one of the most abundant artifact classes found at excavations of historical and neolithic sites. In addition to information about trade and relative chronologies, ceramic analysis can be used to infer use and reuse of pottery. The aim of this study is to present an analysis of pottery recovered from a small-scale excavation in Konso and to explore the possible use and reuse of the ceramic vessels recovered.

**King, Adam**

[56] *Continuing the Debate on the Dating of Etowah's Mound C*

It has been 47 years since one of Southeastern archaeology's marquee projects--the complete excavation of Etowah's Mound C--was finished. The continued relevance of the project is evidenced by the fact that its results are still debated. In this paper I present a contribution to an ongoing debate about the dating of Mound C. Using radiocarbon dates, sherd collections from mound fill and grave fill, and ceramic vessels from graves I argue that Mound C was built between AD 1250 and 1375. I also present a response to recent critiques of these dating arguments.

[80] *Discussant*

**King, Eleanor (Howard University)**

[169] *The Economics of Maya Complexity and the Complexity of Maya Economics*

Ideas about prehispanic Maya sociopolitical complexity have advanced considerably since scholars viewed them as peaceful people living around empty ceremonial centers. More data and readable texts have revealed a contentious history that Mayanists continue to mine for models. In contrast there has been a lag in our conceptualization of Maya economies. Despite Sharer's pioneering advocacy of markets and studies suggesting significant economic complexity, we tend to view their economies as underdeveloped and subordinate to their political activities. This paper argues that the western, utilist bias that still dominates our thinking prevents us from understanding such differently complex economic systems.

[33] *First Chair*; [93] *see Shaw, Leslie C.*

**King, Jason (University of New Mexico)**

[152] *Temporal Variation in Lower Illinois Valley Middle and Late Woodland Mortuary Practices*

Previous research has implicated differential treatment of dead in the (re)production of ancestorhood and ancestor ideology in Lower Illinois Valley Middle (50 B.C. – A.D. 400) and Late (A.D. 400 – 1000) Woodland communities. These ritual processes were not static across time and space; and, finer chronological control is necessary to effectively model temporal and spatial variation. In this paper, 23 new radiometric assays from Middle and Late Woodland cemeteries supplement existing dates and are used to establish regional chronologies of funerary activity. Changing practices are then linked to ancestorhood's shifting roles in the negotiation of community membership and ideology.

[152] *First Chair*

**King, Julia** [120] *Discussant* [140] *Discussant*

**King, Natalie (University of Pittsburgh)**

[156] *Settlement, Mobile Pastoralism, and the Steppe: Strategies Toward an Analysis of Social and Spatial Organization in Bronze and Iron Age Societies in Mongolia.*

Analysis of the social organization of mobile pastoralist societies in Late Bronze Age and Iron Age Mongolia have largely been determined by landscape approaches to ritual monuments. Analyses of settlements and settlement systems are vital to contextualizing the art, burials, and monuments embedded in the landscape, and have been only recently targeted as significant and viable avenues of inquiry. This paper will emphasize the use of multiple lines of evidence - faunal remains, soil micromorphology, and ethnoarchaeological data, as a promising approach to an archaeology of mobile pastoralist settlement.

**King, Stacie (Indiana University)**

[108] *Crossroads or Corridor? Nejapa and the Zapotec, Aztec, and Spanish empires in Southern Mesoamerica*

Nejapa, located southeast of Monte Albán and Oaxaca City in southeastern Oaxaca, Mexico, lies along an important and highly traveled trade route connecting the highland Valley of Oaxaca and the resource-rich Isthmus and Soconusco coast. This location at a key crossroad positions Nejapa residents as witnesses (and potential players) in major developments in Mesoamerican empires in the last 2,000 years. I will discuss the relationships between macro-regional events and local sociopolitical change in Nejapa and consider how to theorize about local sociopolitical developments, without focusing only on the urban traders, migrants, and empire-builders that passed through.

**Kingsley, Melanie (Brandeis University)**

[68] *Digging Identity: Recognizing borders among the ancient Maya*

Economic relationships cross political and/or ethnic boundaries, making it difficult to discern community identity in the material record. In addition, geographic proximity can result in stylistic markers which are either shared across a political border or even purposefully responded against within one. This paper argues that archaeologists must clearly differentiate the way they use categories of artifacts to establish borders and frame communities. Data from Southeastern Guatemala will be used to better hypothesize how borders can be recognized in the material record and the extent to which these peoples might have seen themselves as 'Maya'.

[68] *First Chair*

**Kintigh, Keith (Arizona State University) and Jeffrey Altschul (Statistical Research, Inc.)**

[37] *Sustaining the Digital Archaeological Record*

As we work to establish the Digital Archaeological Record as a national digital archive for archaeology, we must develop a business plan that ensures long term sustainability. Our revenue and expense model is consistent with the market and with the additional social constraints on the archive that we anticipate the discipline will demand. Working through the assumptions and results of this financial model provides a framework for discussion not just of the expected costs but also of the different ways in which it might plausibly be financially sustained by the discipline.

[22] *Discussant* [22] *Second Chair*

**Kirch, Patrick (Univ. California Berkeley)**

[1] *Archaeology and Biocomplexity*

At the interface of the social and natural sciences, archaeology is uniquely positioned to fill a key role in multi-disciplinary research on dynamically coupled human and natural systems, or the study of biocomplexity. This paper describes a major collaborative endeavor, the Hawaiian Biocomplexity Project, which has engaged archaeologists, ecologists, soil scientists, demographers, quantitative modelers and others since 2000. The project seeks to use the Hawaiian Islands as a model system for understanding long-term ecodynamics, especially the non-linear relationships between biogeochemical gradients, human populations, and agricultural intensification.

**Kiriati, Evangelia (Fitch Laboratory, British School at Athens, Greece)**

[110] *Beyond Provenance: Ceramic petrology as Tool in the Reconstruction of Technological Landscapes*

Advocating recent developments in archaeological theory and method, this paper focuses on understanding the reproduction of technological practice within certain natural and cultural landscapes. Ceramic petrology has a significant contribution to such research mainly through its combination with regional field surveys. In practice, the reconstruction of technological traditions, and the way landscape resources and techniques are conceived within the context of these traditions, are reconstructed through the petrographic, as well as chemical, analysis of archaeological ceramics, in combination with raw material prospection, replication experiments and ethnoarchaeology. Case studies will be based on research in two Aegean islands, Aegina and Kythera.

**Klarich, Elizabeth (Cotsen Institute, UCLA)**

[162] *Field Schools and Research: the Integrative Approach*

In 2008, the UCLA Archaeology Field Program expanded to include 13 undergraduate training opportunities in 11 countries. Each project is research-driven, with students actively contributing to field survey, excavations, laboratory work, and museum development. Just as the research goals of each project are distinct, so too are the ways in which students are incorporated. This

paper, developed from interviews with the project directors and student participants, presents the diversity of these approaches, outlining which most successfully integrate the interests of students, the specific research goals of the project, and the overall educational objectives of the UCLA Field Programs.

[162] *First Chair*

**Klaus, Haagen (Utah Valley University)**

[170] *The Persistence of Identity: Bioarchaeology of a Mochica Cultural Substratum in the Lambayeque Valley, Peru (A.D. 750-1750)*

Emerging from a major theme of the Sicán Archaeological Project, this paper critically explores the question of identity among non-elite Lambayeque populations following the Moche collapse. Synthesizing mortuary pattern, skeletal biological, and ethnohistoric data, a model of a dynamic and persistent Mochica ethnic substratum is examined from the late pre-Hispanic to colonial eras. The findings underline the multi-ethnic nature of Sicán society, considers a perspective of "collapse" as part of a larger cyclical process of cultural dynamism, and suggests some future directions in the study of the Mochica cultural phenomenon and its role in shaping Andean history into the present.

**Kligmann, Debora (CONICET - UBA (Argentina)), Elena Diaz Pais (CONICET) and Milena Calderari**

[139] *Lord Of The Snakes: Belief Systems In Northwest Argentina*

The Tiahuanaco influences reach northwest Argentina during the Regional Integration Period (600-1200 AD), which is characterized by the Aguada style. Even though there are three recurrent motifs in Aguada iconography, ophidians, unlike felines and human characters, have not been studied in detail. In this paper we analyze the patterns used to depict snake-like designs. The results obtained show that in Aguada iconography ophidians are depicted by themselves or combined with other species. Through iconographic analyses we have been able to establish several representational themes and we have correlated them with ethnographic and ethnohistorical information. Thus, we have a glimpse of the belief systems of the ancient inhabitants of northwest Argentina.

**Kloetzer, Diane [90]** *see Pepe, James P.*

**Klokler, Daniela [85]** *see Villagran, Ximena; [165]* *see Gaspar, Maria Dulce*

**Knapp, Rebecca**

[85] *Space and Society: Spatial Analysis of Dorset Palaeoeskimo Slate Tools at the Phillip's Garden Site*

This presentation will discuss the results and implications of spatial analysis research conducted at Phillip's Garden (EeBi-1), a Dorset Palaeoeskimo site in Newfoundland. Spatial distribution of slate tools found at Phillip's Garden, thought to be used to processing hides, was examined using k-means analysis. When depositional contexts of identified artifact clusters were determined, the locations of those in primary depositional context were examined. Resulting location patterns were then analyzed to determine if there was temporal variability in the placement of activity areas. Preliminary research was also conducted regarding gender and cosmology's influence on the placement of slate tools.

**Knell, Edward (CSU, Fullerton) and Matthew E. Hill (University of Iowa)**

[41] *Cody Bones and Stone: Regional Variation in Cody Complex Foraging Behavior*

This study identifies regional-scale patterns of Great Plains Cody complex (10,000 to 8600 yrs BP) land-use and subsistence through inferences gained by linking dedicated lithic and faunal analyses. Principles of human behavioral ecology theory are used to generate models depicting seasonal variation in land-use and subsistence organization in different environmental zones of the Great Plains, which are tested using data from 20 Cody sites. Variables such as diet breadth, kill size, seasonality, tool transport and maintenance, tool use-life, and lithic raw material diversity are used to test the model predictions, which ultimately provide a dynamic view of Cody mobility and subsistence practices.

[41] *First Chair*

**Knight, Charles (University of Vermont)**

[148] *Reduction Technology and Source Material Variation in the Early Formative to Classic Period Obsidian Economy of Tres Zapotes*

Variations in Formative to Classic period reduction technologies at Tres Zapotes, Veracruz,

Mexico parallel patterns identified elsewhere in the southern Gulf lowlands. At the same time, evidence of platform grinding on prismatic blades dating to the Terminal Formative period, and the continued use of bipolar technology well into the Classic period reflect strategies of obsidian tool production and consumption that differ from other contemporaneous polities in the region. These differences and similarities are investigated diachronically to better understand the role of obsidian in the political economy of Tres Zapotes.

**Knight, Vernon (University of Alabama)**

[42] *Life on the Mounds at Moundville*

We possess modern data on stratigraphy, foodways, and artifact assemblages for eight of Moundville's major mounds. Additionally, extensive horizontal excavations have been conducted on the summits of three mounds. These data reveal a surprising diversity that cannot be explained by a dichotomy between mortuary temple mounds versus elite residence mounds. Elite productive activities appear to be complementary between mound contexts, suggesting reciprocal exchange of goods and services. I speculate that these activities produced a fabric of obligation that temporarily countered the tendency of the Moundville polity to fission. The social setup is profoundly segmentary rather than hierarchical.

[150] *see Persons, A. Brooke*

**Knipper, Corina [91]** *see Fisher, Lynn E.*

**Knudson, Kelly (Arizona State University)**

[170] *Middle Sicán Residential Mobility and Paleodiet through Stable and Radiogenic Isotope Analysis*

The Middle Sicán period (AD 900-1100) was a period of cultural florescence on the northern Peruvian coast. As part of a much larger interdisciplinary project that investigates Sicán social organization, and particularly mortuary behavior, residential mobility and paleodiet was investigated through the use of radiogenic and stable isotope analyses of archaeological human enamel and bone from the West Loro cemetery and modern faunal proxies from the region. More specifically, strontium, carbon and oxygen isotope analyses were performed on multiple samples from various individuals to reconstruct mobility and diet through these individual's lifetimes, and to relate these data to variability in space, time, and social status.

[81] *see Torres-Rouff, Christina*; [10] *see Somerville, Andrew D.*; [12] *see Berryman, Carrie Anne*

**Knutson, Steve [67]** *see Guillen, Sonia E.*

**Kobayashi, Tatsuo [167]** *Discussant*

**Kochel, Meagan (Ripon College) and William Whitehead (Ripon College and UWC-Fond du Lac)**

[99] *Determining of Isotope Fractionation in Archaeological Samples from Oaxaca, Mexico using Fractional Wavelength Detection Infrared Spectroscopy*

This poster will present the results of a study of isotopic fractionation using fractional width infrared spectroscopy from carbon residues linked to roasting and burning at the site of El Palmillo, Oaxaca, Mexico. Specifically, carbon from roasting pits will be analyzed and interpreted in reference to the photosynthetic pathways of C3, C4 and CAMS plants. This study has important implications for cultural patterns of feasting, ritual, and environmental use in the highlands of Oaxaca.

**Koerner, Shannon (University of Tennessee)**

[53] *Reconstructing the Townsend Mississippian Occupations: Making Sense of Deflated Site Features*

The full-scale mitigation of prehistoric features in Tuckaleechee Cove along a stretch of US-321 uncovered a long history of prehistoric occupation in the Appalachian Highlands of eastern Tennessee. The Townsend Archaeological Project offered an opportunity to investigate contiguous Mississippian settlements that would otherwise go unnoticed in the area due to very low artifact and feature density. Parceling out discrete Mississippian occupations was tenuous, however, due to a lack stratigraphic separation from earlier and later cultural features. This poster outlines the difficulties encountered and resolutions undertaken while reconstructing early Mississippian settlements in the foothills of eastern Tennessee.

[142] *see Sullivan, Lynne*

**Kohler, Tim (WSU/SFI/CCAC)**

[1] *Model-Based Archaeology as a Foundation for Interdisciplinary and Comparative Research, and an Antidote to Agency/Practice Perspectives*

I define "Model-Based Archaeology" with some examples from the Village Ecodynamics Project and allied work in the Southwest, and argue that such approaches lead more readily to interdisciplinary and comparative successes than do perspectives developed from agency/practice theory which, I argue, is typically conceived at the wrong scale to be useful to archaeologists and lacks a convincing account of agent motivations. An analogy is made between quantum mechanics and agency/practice approaches, to argue that social agents undergo a phenomenon akin to "entanglement" that results in their producing a "classical" archaeological record even though they may consider themselves as inhabiting a "quantum" world.

[161] *Discussant*

**Kohut, Betsy (SUNY-Albany), Beniamino Volta (University of California, San Diego) and Mary Margaret Morgan-Smith (University of North Carolina, Chapel Hill)**

[154] *The Rural Elites of Kiuic: Public Architecture, Domestic Spaces, and Site Abandonment at Escalera al Cielo*

A distinct feature of settlement in the Bolonchén region of Yucatán is elite hilltop complexes. This paper presents the results of the excavation of one such Maya elite complex. Escalera al Cielo, located 1.5 km from the center of Kiuic, is composed of various plaza groups with both residential and public architecture. Questions related to chronology of occupation, building function, social stratification, craft specialization and abandonment are considered. Also examined are the possible relationships that may have existed between the inhabitants of Escalera al Cielo and Kiuic and what this suggests about the nature of northern Maya polities and urbanism.

**Kohut, Lauren (Vanderbilt University), Andrew Tempest (University of Pittsburgh) and Verity Whalen (Purdue University)**

[97] *Religious Affiliation? Defining Relationships Between Public and Domestic Architecture at Malata*

This paper presents preliminary results from the excavation of two residential structures at the site of Malata, a Late Horizon settlement that became a mission during early colonial times. These structures were selected for excavation for their proximity to pre-Hispanic and colonial civic and ritual architecture and thus allow examination of their relationship to (respectively) Inka civic-ceremonial architecture and a colonial Christian temple built during the first generation after conquest. Excavations revealed that the two buildings possessed significantly different internal spatial organizations, suggesting distinct functions. Additionally, analysis of the structures problematizes straightforwardly defining structural associations based primarily on spatial proximity.

**Kolata, Alan (University of Chicago) [12] *Discussant* [81] *Discussant***

**Kolb, Charles (National Endowment for the Humanities) [110] *Discussant***

**Kole, Kathleen [46] *see Francis, J. Michael***

**Kolhatkar, Manek (université de Montréal) and Adrian Burke (Université de Montréal)**

[91] *Developing an Inventory of Prehistoric Quarries in the Province of Quebec, Canada*

The first step in the study of any type of artifact or site is classification and inventory. An inventory permits comparisons between site types and is also an essential management tool for archaeologists. We present a recent study of prehistoric stone tool quarries in Quebec and address the different challenges associated with creating such an inventory, in particular satisfying different archaeological constituencies: cultural resource managers, research oriented archaeologists, the public. We propose nineteen technical, cultural and geographic criteria for evaluating the importance of these quarries, criteria which allow each group to use the inventory for its own purposes.

**Kollecker, Mark [88] *see Eren, Metin I.***

**Konwest, Elizabeth (Indiana University)**

[19] *The Importance of a Thorough Survey: Xuenkal and Periphery, Yucatan, Mexico*

In the Cupul region of the Yucatán, Mexico, the site of Xuenkal offers an opportunity to investigate how Chichén Itzá, Xuenkal's neighbor to the southwest, influenced communities in the region. In the four years of surveying at Xuenkal, 609 structures have been recorded. The total



area surveyed has been 1.8 square kilometers at 100% coverage. Features such as rejolladas, caves, and cenotes have also been recorded. Initial findings show that the site of Xuenkal was fairly extensive before the rise of Chichén Itzá and that settlement patterns at Xuenkal change during the rise of Chichén.

**Korisettar, Ravi [188]** *see Cunningham, Kevin*

**Kormazopoulou, Lina [130]** *see Prevedorou, Eleni Anna*

**Korosec, Gregory (University at Buffalo), Dustin Keeler (University at Buffalo) and Eva Hulse (University at Buffalo)**

[145] *A Systematic Survey of Neolithic Sites in Northern Finland*

In the summer of 2008 a survey was completed in the Yli-Ii region of Northern Finland as part of the Social Change and the Environment of Nordic Prehistory (SCENOP) project. The aim of the survey was to systematically survey three elevation contours which related to three distinct periods in time based on post-glacial uplift patterns. Presented in this poster are the results of the survey which consisted of surface inspection and soil sampling. The sites from this time period, 5500 to 4500 B.P. are clearly distinguished by pit-house surface depressions. Phosphorous spot testing was used to sort out ambiguous non-sites from ambiguous sites.

**Korpisaari, Antti (University of Helsinki, Finland)**

[81] *A Lake Titicaca based Tiwanaku social identity?*

In 1998-2006, Finnish-Bolivian archaeological research at two Tiwanaku Period sites in the Bolivian canton of Cascachi, on the islands of Cumana and Pariti led to the discovery of some thirty burials and two offering pits filled with the sherds of intentionally broken high quality ceramic vessels. Both the Tiraska tombs and, especially, the Pariti ceramics differ quite notably from the Tiwanaku Period material of the Tiwanaku and Katari Valleys. I argue that the Tiraska and Pariti finds correspond to a particular Lake Titicaca based social identity within the larger Tiwanaku cultural phenomenon.

**Kosakowsky, Laura [130]** *see Novotny, Anna*

**Kosiba, Steven (University of Chicago)**

[113] *Placing Politics, Cultivating Territory: The Cultural Construction of an "Ordered" Landscape during Inka State Formation (Cusco, Peru)*

This paper presents archaeological and ethnohistorical data to argue that the idealized landscape of the Inka capital was predicated upon the conversion of particular pre-Inka places. I demonstrate how an Inka ideology of spatial and social order was reified in practices that ritually put pre-Inka spaces to death, and in narratives that describe a cosmological struggle between the Inkas and the past. By tearing down and rebuilding places, the Inkas not only declared but constituted their power, recasting local places as essential parts of an Inka landscape, while casting themselves as the enforcers and embodiments of an imagined territorial order.

**Kotegawa, Hirokazu**

[92] *Interpretaciones en cuanto a los monumentos olmecas (Interpretations of the olmec monuments).*

Es muy claro que las imágenes tiene muchas informaciones sobre varias perspectivas. Pero, ya sabemos que es difícil interpretar las imágenes representadas en los artefactos arqueológicos. Además, no hubo suficiente evidencias arqueológicas ni otros artefactos arqueológicos para compararlos en los principios de los estudios iconográficos olmecas. Afortunadamente, ahora, se aumentaron varias evidencias arqueológicas olmecas en mesoamérica. Además, se registraron nuevos monumentos olmecas. En esta ponencia, se va a enfocar en los monumentos escultórico de la cultura olmeca en la zona del Golfo de México. Y se intentará mostrar algunas interpretaciones sobre los monumentos olmecas para acercar a la sociedad olmeca.

**Kovacevich, Brigitte (University of Virginia), Hector Neff (California State University, Long Beach), Molly Morgan (Vanderbilt University) and Rafael Castillo (University of San Carlos, Guatemala)**

[58] *The Use of Laser Ablation Inductively Coupled Mass Spectrometry (LA-ICP-MS) on Obsidian Microdebitage: Case Studies from Chiquiuitan and El Baúl*

This study tested the efficiency of LA-ICP-MS chemical characterization on obsidian microdebitage. Given the importance of microdebitage in identifying primary contexts for obsidian production, the effective sourcing of these artifacts is imperative and cannot be performed by all

chemical characterization techniques. For these reasons, the successful application of LA-ICP-MS could provide a new and important tool with which archaeologists can approach obsidian procurement and production. Case studies from Chiquiuitan and El Baúl will be presented.

**Kovacevich, Brigitte [48]** *see* *Callaghan, Michael*

**Kowalski, Jessica (USM), Diana Flosenzier (University of Southern Mississippi), H. Edwin Jackson (University of Southern Mississippi) and Peter VanDyck (University of Southern Mississippi)**

[56] *The Refuse of Elite Ritual and Politics in the Winterville Chiefdom*

Moments in the waxing and waning of the Mississippian center at Winterville Mounds in northwest Mississippi are recorded by two large mound-related trash pits, one dating to the initiation of the mound building program there (AD 1200) and the other near the end of its reign as a chiefly center (AD 1500). Based on proximity, contents of these pits are posited to contain refuse from elite activities including ritual feasting on or adjacent to two residential mounds. A comparison of pit contents reveals the commonalities as well as contrasts in the political and ritual lives of the Winterville elite.

**Koziarski, Ralph (UW-Milwaukee)**

[23] *Animals and Ritual in Late 17th Century Meskwaki Society*

Analysis of faunal remains from Eastern-central Wisconsin's Bell site has revealed that several features and their associated faunal remains might best be described as remains of ritual behaviors. The Bell site was the location of the Grand Village of the Meskwaki from AD 1680-1730. In order to better understand the ritual deposits identified at the site, this paper discusses these remains and looks to Meskwaki ethnography and ethnohistoric literature to help in characterizing the role played by animals in Meskwaki cosmology.

**Kramer, Karen (Harvard University) and Russell Greaves (Peabody Museum of Archaeology and Ethnology, Harvard University)**

[178] *Persistence of Wild Plant Resources in the Shift to Horticulture: Ethnoarchaeology of Wild Roots and Manioc among Pumé Foragers of Venezuela*

Roots are key resources in many savanna environments. Until recent developments in starch residue identification, archaeological appreciation of root contributions to past diets was problematic. Roots are often assumed to drop out of diets during transitions to agriculture. Few ethnoarchaeological data address this question. Pumé foragers of the Venezuelan llanos continue collection of large amounts of wild roots in combination with low levels of manioc cultivation. Analyses show that roots are more economically valuable than manioc and constitute a significant proportion of the diet during the horticultural season. Pumé manioc cultivation helps fund the persistence, rather than replacement, of foraging.

**Krasinski, Kathryn (University of Nevada Reno) and Gary Haynes (University of Nevada, Reno)**

[77] *Broken and Flaked Bones of Mammoths and Modern African Elephants*

Clovis and pre-Clovis assemblages in the Americas may contain proboscidean bone flakes and expedient tools, possible evidence of the earliest humans in the New World. Although large-mammal bones are known to have been used as raw materials in the European Middle and Upper Paleolithic, the end-products are often standardized or finished tools and artwork. Formal experimental flaking of proboscidean bones has been rare. The creation of characteristics described in the North American sites has not been well documented. Experiments with African elephant bones in Zimbabwe test the expectations of hammerstone-produced and flaked proboscidean assemblages as valid criteria for human modification.

[77] *First Chair*

**Krigbaum, John [85]** *see* *Coutts, Karen H.*

**Kruchten, Jeffery (ITARP- U. of Illinois), Mellisa Baltus (University of Illinois) and Timothy Pauketat (University of Illinois)**

[23] *Genealogies of Temple Rituals in Earth, Fire, and Water at an Early Cahokian Outlier*

Special buildings, post mounds, intermittent occupation, and unique colored sediments in several dozen features excavated between 2000 and 2008 at the Pfeffer site point to an unusual short-term town in the greater Cahokia region. Unlike any outliers yet known, the specially mixed, colored, burned, or weathered sediments used to line and fill subterranean facilities and abandoned building basins are especially important to newer interpretations of Cahokia's

formation if not also to general notions of agency and materiality. The recently Mississippianized inhabitants of this site were actively engaging earth, water, and fire in unprecedented ways as part of radically reconfigured political-religious fields.

**Krum, Cassandra (Washington State University), Andrew I. Duff (Washington State University) and Caitlin A. Wichlacz (Washington State University)**

[18] *Technological Analysis of the Decorated Ceramic Assemblage from a Chacoan Great House Community in West-Central New Mexico.*

This study presents the results of visual analyses of ceramic tempers and refired paste color from several sites in the vicinity of the Pueblo II (ca. A.D. 1050-1130) great house of Cerro Pomo in west-central New Mexico. Building upon previous research, which has centered on the brown and grey utility wares, this study focuses on decorated wares to further examine patterns of ceramic production and distribution in this area. Results suggest differences in materials used to produce decorated and undecorated ceramics, but assessment of raw clays indicates that all wares could have been made locally.

**Kuijt, Ian (University of Notre Dame)**

[143] *Tempos of Time – Pulses of Life: InisAirc, Ireland, 1907, through the eyes of Bridget O'Malley*

The material record of post-1850 coastal life, especially on remote islands such as InisAirc, Co. Galway, illustrate the disintegration of the family unit, emigration pathways to America, and deep personal histories. Drawing upon archaeological remains, historical records, and oral accounts, in this presentation I develop a multi-faceted understanding of changing island life and community through the eyes of Bridget O'Malley, an 11 year old girl who traveled to Boston in 1909. Her story both humanizes and helps us understand cycles of community abandonment, the movement of people within isolated coastal communities, and the social impact of local emigration.

**Kuijt, Ian [44] see Goodale, Nathan B.; [145] see Guerrero, Emma; [174] see Conway, Meagan**

**Kulhavy, Kathryn (San Diego State University)**

[164] *Zuni Warfare: Does the Mortuary Record Reflect Ethnographic Information at the Hawikku Site of New Mexico?*

Examination of Zuni social organization and ceremonial life in the ethnographic record provides insight into how the Zuni viewed warfare, both as a tool for socializing their youth and in their general cultural view. As a result, bioarchaeological data from protohistoric burials at the Hawikku site should reflect trauma, both healed and perimortem, as a physical indication of the emphasis on warfare within the community. Analysis of trauma on 185 skulls suggests Zuni ethnographic accounts describe a more symbolic role of warfare during the protohistoric period, instead of active participation in violence related to warfare as part of daily life.

**Kulisheck, Jeremy (Santa Fe National Forest) and Ann F. Ramenofsky (University of New Mexico)**

[171] *Regarding Sixteenth-Century Native Population Change in the Northern Southwest*

In contrast to popular perception, the Native peoples of the Southwest experienced only limited demographic disruption during the sixteenth century. To emphasize the differences between the U. S. Southeast and northern Southwest, we use criteria from the Southeast that established catastrophic decline there. We examine evidence in four domains: settlement patterns; bioarchaeology; historic narratives; and ethnogenesis. Collectively, the evidence indicates that, despite Spanish intrusion, the Native sixteenth-century northern Southwest experienced relative social and demographic stability. Factors that contributed to this stability included the sporadic nature of Spanish exploration, the region's distance from Mexico, and the discontinuous distribution of Native populations.

**Kuns, Erin (Public Archaeology Lab)**

[5] *Using Old Collections to Make New Connections*

Due to conservation standards and requirements, archaeological collections from CRM-based excavations are rarely housed in the communities where the excavations took place. This paper is about forging new relationships around old collections to facilitate repatriation and to use the collections in local public education about archaeology, heritage, and responsible development.

[5] *Second Chair* [5] *Second Organizer*

**Kurin, Danielle (Vanderbilt University) and Enmanuel Gomez (UNSC-Huamanga)**

[4] *"Aguerridos Chanka": A Bio-archaeological Study of Group Violence in Peruvian Prehistory*  
 This paper examines the relationship between identity and violence among the Chanka of Andahuaylas, Peru, during the Late Intermediate Period (AD 1000-1400), a time of post-imperial collapse which has been described as "war-like" and "chaotic." Employing a bioarchaeological approach, cranial modification--an important marker of identity in the ancient Andes--is correlated with high levels of traumatic injury, indicative of interpersonal violence. These preliminary results suggest that in times of sustained conflict and in the absence of a centralized authority, certain groups of people may be disproportionately predisposed to interpersonal violence because they are perceived of as "different."

**Kurnick, Sarah (Univ. of Pennsylvania)**

[36] *Centering the Universe: A Triadic Stone Sphere Cache from La Blanca, Guatemala*  
 In 2004, the La Blanca Archaeological Project discovered a quatrefoil-shaped monument made from sculpted, compact earth. Dating to the early Middle Preclassic (900-400 BC), that monument is the earliest known Mesoamerican example of both earthen sculpture and the quatrefoil motif. During the same field season, project members also discovered a cache of three stone spheres located directly above the quatrefoil. This paper will describe and analyze those stone spheres. It will consider their significance and meaning, and will explore what relationship, if any, exists between the cache of spheres and the development of an institutionalized social hierarchy at La Blanca.

**Kus, Susan (Rhodes College) and Christopher Peebles (Indiana University)**

[17] *Could'a, would'a, should'a: Kus and Peebles discuss Peebles and Kus*  
 As a graduate student I was honored to be second author on an article that would be the first entry on my CV. This turned out to be an article that would be quoted, misquoted, cited after having been read, misread, and unread. Several decades later it is interesting to return to the article and, more importantly, to the milieu of intellectual discussion and collaboration that resulted in the original article. Without pretention to rival Gregory and Catherine Bateson, nevertheless I, Kus, undertook an extended conversation with Peebles concerning the original article, archaeology, theory, archaeology as anthropology, and everything else.

[8] *Discussant*

**Kus, Susan [177]** see *Raharijaona, Victor*

**Kwoka, Joshua J. [181]** see *Barbour, Warren T D*

**Ladefoged, Thegn N. [147]** see *Mulrooney, Mara A*

**Laguer-Diaz, Carmen (University of Florida)**

[172] *Landscape as Memory: Landscape, Memory and Identity in Puerto Rico*  
 Puerto Rico's colonial situation and limited amount of viable space for habitation makes for an interesting case study from an archaeological and anthropological perspective. All people involved have a different perspective and will want and, in theory, should be taken into consideration when archaeological research is being done. Bearing in mind this complex interaction we can examine social memory (remembering and unremembering), and how it forms and informs our concept of identity. In this paper, I intend to examine these contested perspectives and create a text for understanding this human impulse to remember and to find meaning in it.

**Lakew, Bizuayehu [107]** see *Arthur, John W.*

**Laluk, Nicholas (White Mountain Apache Tribe - University of Arizona) and William B. Gillespie (Coronado National Forest)**

[189] *Apache Archaeology: Recent Research in the Chiricahua Mountains*  
 Archaeological research concerning Apache archaeology in the Southwest U.S. has been labeled tenuous at best. Locating historical-period Apache landscape occupations is difficult. Moreover, interpreting these subtle traces through minimal diagnostic assemblages and historical-period Euroamerican accounts does not highlight Apache interpretations of their former homelands, which, still possess significant and powerful affiliations. This paper presents recent research in Apache archaeology in the Chiricahua Mountains. By combining intense archaeological field methods with on-site Apache interpretations a better understanding of historical-period Apache life-ways can be delineated that not only highlights Apache archaeology but the unique ties Apache people still hold to the Chiricahuas.

**LaMotta, Vincent (University of Illinois at Chicago)**

[164] *Interpreting Avian Faunal Assemblages from an Ancestral Hopi Settlement Cluster in North-Central Arizona*

Analysis of a large collection of avian faunal remains (NISP=2,222) from the site of Homol'ovi I resulted in the identification of approximately 44 species of birds, representing 23 families and 11 orders. This diverse assemblage from controlled, well-dated archaeological contexts provides a vehicle for analyzing variability and change in fourteenth-century ritual practices involving birds. In this paper, I examine ritual and non-ritual processes leading to disarticulation, modification, and disposal of bird bones, and their material correlates. Such correlates provide an aid for interpreting spatial and temporal variability in bird remains from Homol'ovi I and other early Pueblo IV-period sites.

**Landon, David [18]** see *Trigg, Heather B.*

**Lane, Kevin (University of Manchester)**

[16] *Animal Magnetism? Assessing the role of pastoralism in the Andean highlands*

Often marginalised in the modern world, it is nevertheless apparent that pastoralism, or agro-pastoralism, played a major role in the development of Prehispanic Andean highland economies. Delving deeper, this paper then analyses the impact that pastoralism as a distinct social and political system had on the development of South American society. In particular, I argue that Andean cultural development witnesses two parallel developments, one coastal and the other highland. In studying this dichotomy, I focus on the pastoralism as a determinant factor in the cultural trajectory of the Andean cordilleras.

**Laneri, Nicola (IsIAO)**

[11] *The Lifestyle of Ancient Entrepreneurs: Trade and Urbanization in Mesopotamia*

The paper to be presented at this session will investigate the interrelationship between the development of long-distance trade by private merchants and their emerging role in the social organization of ancient Mesopotamian societies during the early second millennium BC. In particular, this analysis will follow an epistemological trajectory that will bring attention to the impact that these new social groups had on the transformation of the urban planning and settlement patterns of the cities in Mesopotamia and other Near Eastern regions during this fundamental historical period.

[95] see *Schwartz, Mark*

**Lange, Frederick (LSA Associates)**

[41] *Archaeological and Geomorphological Research at the McSweeney Farms Project*

Between 2004 and 2006, LSA Associates, Inc. (LSA) tested and evaluated four archaeological sites within and adjacent to the McSweeney Farms Specific Plan Area in the City of Hemet, Riverside County. This paper places the archaeological resources within the context of geomorphological processes that have affected the Avery Creek alluvial fan. These processes have had a significant impact on the archaeological resources formation processes. The soils analysis concluded that the dark color of some soils is caused by outwash of biotite rich alluvium, possibly following an earthquake-induced landslide upstream on Avery Wash and does not represent cultural midden.

[117] *Discussant*

**Lange, Hans [146]** see *LeMoine, Genevieve*

**Lankford, George (Emeritus, Lyon College)**

[42] *Was There a Moundville Medicine Society?*

This question is important because of the other questions it raises: is there early ethnographic evidence of the founding of religious sodalities in the Woodlands and Plains? Answer: some (examples: Midé society and Sun Dance), and that situation poses the question of whether such a society could have been imported to prehistoric Moundville. Addressing that problem involves determining what conditions are necessary to permit a local polity to adopt a sodality from alien societies and what benefits might accrue from membership in such a sodality. Finally, do these considerations provide archaeologically testable hypotheses?

**Lansdell, Brent (Brockington and Associates Inc.)**

[14] *The Contact Period Ashley Phase: A View from a Homestead on Daniel Island, South Carolina*

The excavation of an Ashley Phase homestead on Daniel Island, South Carolina has provided

valuable data on the peoples inhabiting the coast during the early Contact period (AD 1520-1650). The preservation of refuse pits and house plans at the site have provided much needed data on material culture, subsistence, and settlement patterns in the region. The Ashley phase occupies a unique geographical and temporal location where large indigenous polities occupied the interior and Europeans begin attempts to settle along its peripheries. This paper will place the Ashley phase occupation within a broader regional and historical context that indicates continuity between the late Pre-Contact and Ashley phase prior to the collapse of indigenous polities in the region and the founding of the Carolina colony.

**Lanzarone, Peter (University of Georgia)**

[174] *Stone Artifact Illustration: A Dying Art?*

This project examines the comparative accuracy between photographic and illustrative representation of flaked stone artifacts. Illustrations are expected to be more accurate representations, since they are classically favored in publication. A survey of 19 students in a Lithic Technology course at the University of Florida provide results as to how detailed flake scars are identified on a stone tool face photographically. Compared to illustrations of the same artifacts, the results show that there is much greater variability in photographed images. Should line drawings become abandoned in light of a new digital technology and is it truly a dying art?

**Lapham, Heather (Southern Illinois University Carbondale), Tracy L. Prowse (Southern Illinois University Carbondale), Heather Millis (TRC Environmental Corporation), Jennifer T. Malpiedi (Southern Illinois University Carbondale) and Lauren A. Forsythe (Southern Illinois University Carbondale)**

[142] *Prehistoric Dog Use at the Broad Reach Site in Eastern North Carolina*

A zooarchaeological study of more than a dozen dogs intentionally buried at the Middle and Late Woodland period (ca. A.D. 200-1500) Broad Reach site (31CR218) in Carteret County, North Carolina, provides important insights into the role of domestic canines in the prehistoric Southeast. Skeletal analysis has identified pathological changes on numerous vertebral elements, suggesting some of the dogs carried or hauled heavy loads. Stable isotope analysis ( $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$ ) of bone collagen provides information on the diets of these working dogs. A spatial and contextual analysis will also be presented to further explore the relationship between dogs and their human owners.

**LaPorta, Philip [91]** see *Brewer-LaPorta, Margaret C.*

**Latek, Maciej [16]** see *Rogers, J Daniel*

**Lau, George (Sainsbury Research Unit)**

[15] *Domesticating others: A comparison of Recuay and Moche warfare in ancient Peru*

This paper focuses on the doing and thinking of warfare among two neighboring, warring cultures of the Early Intermediate Period (AD 1-700), the Recuay and Moche. Survey and excavation evidence – as well as conventions in combat imagery – indicate a preoccupation with enemy-outsiders. Beyond analogies to the Inka and historically known Andeans, salient comparisons can be made between the ancient cultures and lowland Amazonian groups, where enemies (the classic alter) become consumed and internalized into local arrangements and thought. Moche and Recuay persons were made through a 'culture' of warfare, wherein both warrior and practice were celebrated in public art/ritual.

**Laumbach, Karl [18]** see *Seamont, Morgan S.*; [18] see *Ferguson, Jeffrey R.*

**Laumbach, Toni [18]** see *Ferguson, Jeffrey R.*

**Law, Randall (University of Wisconsin)**

[136] *Indus Civilization Rock and Mineral Trade Networks: An Emerging Multi-Regional Picture*

Broad-scale geologic provenance studies of stone and metal artifacts from the site of Harappa have provided a detailed picture of the extent and direction of rock and mineral resource acquisition at that Indus Civilization city. In this presentation, preliminary provenance studies of materials from three additional Indus urban centers – Mohenjo-Daro, Dholavira and Rakhigarhi – are summarized. The data from these sites, although limited at present, are providing a new, multi-regional picture of rock and mineral trade in northwestern South Asia during the third millennium BC.

**Lazrus, Paula Kay (St. John's University)**

[124] *Landscape and Land Use in a South Italian Community*

The use of the landscape in the area of Bova southern Calabria during the Napoleonic era provides a glimpse into the shifting economic and social relationships. This poster highlights some of the relationships between individuals and the Church in terms of the exploitation of natural and domesticated resources and the balance of power in the region that began to transform the landscape in the 1800s. Changing economics would transform the landscape as it continues to do at present and may offer us a more dynamic view of past land use and landscape.

[104] *First Moderator*

**Le Bourdonnec, Francois-Xavier [95]** see Carter, Tristan

**Leahy, Kristin [51]** see Meyer, Regina M

**Leckman, Phillip (Statistical Research Inc.) and Shaun Phillips (Statistical Research, Inc)**

[75] *Macro-scale Survey at Fort Bliss: Settlement and Spatial Patterning along the Margins of the Tularosa Basin*

Spatial data derived from the ongoing survey of more than 30,000 acres along the northern edge of the Tularosa Basin provide intriguing insights into the nature of settlement and land use in this important but historically under-studied region of southern New Mexico. By considering this considerable dataset via a variety of spatial analytical methods, we illuminate archaeological dynamics with the potential to inform future research into settlement history and landscape use across a thousand-year swath of this region's history. These tentative patterns are discussed in light of other large-scale survey data from within the region and across the American southwest.

**Leckman, Phillip [40]** see Phillips, Shaun M.; [75] see Ward, Christine G.

**Leclerc, Mathieu (Université de Montréal), Adrian Burke (Université de Montréal) and Gilles Gauthier (Université de Montréal)**

[88] *Chemical Characterization of Cherts from Bas-Saint-Laurent and Gaspésie, Quebec: A Non-Destructive Approach*

The objective of this project is to use energy dispersive x-ray fluorescence (EDXRF) to chemically analyze chert originating from two different prehistoric quarries exploited intermittently from the Late PaleoIndian through the Archaic and into the Woodland periods: the La Martre DhDm-8 site, Gaspé Peninsula, and CkEe-28, Témiscouata, Québec. Archaeological samples from sites on the St. Lawrence Estuary including Rimouski (DcEd-1), l'Anse-à la-Vache and Turcotte-Lévesque (DaEi-6 and DaEi-8) were also tested and compared to the results for the quarry samples. This type of analysis is also valuable in archaeological studies since it is non-destructive, allowing analysis of the artifacts as is.

**Lee, Lori (Maxwell School of Citizenship and Public Affairs)**

[140] *Racial Boundaries on the Frontier of Emancipation: Slavery at antebellum Poplar Forest Plantations in central Virginia were established homelands by 1830, yet their inhabitants were affected by shifting sociocultural boundaries and temporal frontiers. In the antebellum period, the expansion of the market economy and transportation growth diffused slavery outside of plantations and farms and into towns, commerce, and factories. This diffusion, and the increasing number of hired slaves who filled these niches, had a significant impact on the institution of slavery. The slave community at Poplar Forest provides a case study of the transformation of the daily lives of enslaved laborers who remained on a plantation in this dynamic time period.*

**Lee, Zachary (Kenyon College)**

[114] *Portals to House and Underworld: Entry Features in Late and Terminal Classic*

Excavations in the adjoining Naco and lower Cacaupala valleys, SE Mesoamerica, revealed a distinctive manner of defining entrances to domestic residences dating to the 7th-11th centuries AD: quadrilateral and circular shaped stones are set in the interior parts of the principal entryway's thresholds in some, but not all, domiciles. This paper considers the significance of these threshold stones as markers of passage between different conceptual realms, and of cultural affiliations and social distinctions among residents in diverse communities.

**LeFebvre, Michelle (University of Florida), Christina M. Giovas (University of Washington) and Scott M. Fitzpatrick (North Carolina State University)**

[150] *Pre-Columbian Animal Translocation: Zooarchaeological Evidence from Carriacou, West Indies*

Recent archaeological excavations on the small island of Carriacou in the southern Grenadines (West Indies), have revealed the presence of several animals that were translocated prehistorically. These include three animals previously unknown in this region of the Caribbean: the guinea pig (*Cavia* sp.), armadillo (*Dasyus* sp.), and peccary (*Tayassu* sp.). Here we present the zooarchaeological evidence of the human translocation of these animals on Carriacou and how the discovery of these fauna in the Grenadines is changing our perception of animal use during pre-Columbian times.

**LeFebvre, Michelle [99]** *see deFrance, Susan D.*

**Leftwich, Brent (UC Santa Barbara)**

[29] *Acorns and beyond: Bedrock mortars and behavior in the Central Sierra Nevada*

Bedrock mortars prove to be one of the most ubiquitous archaeological features of the Sierra Nevada and have long been associated with prehistoric acorn processing. However, bedrock mortar utilization appears to have gone beyond pure balanoculture. An intensive research project in the Eldorado National Forest compared bedrock mortars in an approximately 8000 square kilometer area. By examining the relationships between bedrock mortar measurements, site type and size, and environmental location, it may be concluded bedrock mortars were relied upon for a variety of uses beyond acorns.

**Leighton, Mary (University of Chicago)**

[12] *Collaboration, compromise and knowledge construction : Ethnography of archaeology in the Andes*

This paper describes preliminary results and ongoing research from an ethnography of archaeological practice being conducted with the Proyecto Jach'a Marka and related projects in Bolivia, Chile and Peru. Archaeological field work is always collaborative, involving the shared skills, knowledge and labour of individuals from different cultural backgrounds who live and work together for several months at a time. Looking beyond self-reflexivity, this ethnography explores these international and local collaborations (between global north and global south, local and national), within and through which contrasting concepts of history and science are constructed.

**Leka, Marie- Juliette ( Marie-Juliette LEKA)**

[107] *Ethnoarchaeology Techniques and Technological Knowledge: The ceramics case in the Tikar region (Cameroon)*

The confrontation of archaeological, ethno-historical and ethnographic data collected in the Tikar region testifies that the city has known changes and large migrations of populations. Archaeologists perceive those changes through the vestiges of abandoned villages, and oral tradition. However, the use of laboratory methods with ethno-archaeological research on ceramics techniques, and the analysis of basic traditional technological mechanisms, make it possible to understand and organize archaeological observations. We propose to illustrate the relations between the various factors of ceramic production, and significant cultural mutations in identity in the Tikar region.

**Lekson, Stephen (University of Colorado)**

[18] *Chaco Meridian: The Prequel*

A decade ago, Chaco Meridian proposed that Chaco, Aztec Ruins, and Paquimé were sequential capitals linked historically by a shared meridian. Three-fourths of this four-part problem are now widely accepted: Chaco moved north to become Aztec. Paquimé remains problematic. New data indicate that meridian symbolism began long before Chaco. For each of the four Pecos System periods from BMIII to PIII the largest, preeminent site of each period was located on the meridian. Eight centuries of landscape symbolism prior to Paquimé supports the idea that the last (PIV) Chihuahuan center may indeed have been deliberately located on the Chaco meridian.

**Lekson, Stephen [18]** *see Ferguson, Jeffrey R.*; [18] *see Seamont, Morgan S.*

**Leigemann, Achim**

[181] *The Teotihuacan Connection of Northwestern Mesoamerica: New Evidence from Southern Zacatecas*

Recent excavations at the hilltop site of Tepizusco in the southern part of the Mexican state of



Zacatecas have produced new data concerning the cultural/commercial network connecting the Classic period metropolis of Central Mexico, Teotihuacan, with northwestern Mesoamerican groups along the Lerma river drainage and the eastern foothills of the Sierra Madre Occidental (La Quemada and Alta Vista, Zacatecas). In this paper I present the Teotihuacan-related evidence (architecture, ceramics, figurines, obsidian) at Tepizuasco and discuss the implications for the dynamics of cultural and economic links between Central and Northwest Mexico during the 5th and 6th centuries AD.

**Leigemann, Achim [132]** *see Caretta, Nicolas M.*

**Lemke, Ashley [89]** *see Hemmings, C. Andrew*

**LeMoine, Genevieve (Bowdoin College), Christyann Darwent (University of California, Davis), Genevieve LeMoine (Bowdoin College), Hans Lange (Greenland National Museum and Archives) and John Darwent (University of California, Davis)**

[146] *Pottery, Baleen, Iron: 900 years at Cape Grinnell, Inglefield Land, Greenland*  
Excavations during the 2008 field season at Cape Grinnell, part of the Inglefield Land Archaeology Project IPY initiative, revealed an extensive history of Thule habitation at this site. Three Thule winter houses, thought to have been occupied sequentially, likely represent the entire span of the Thule occupation of this region--from the Ruin Island phase (represented by finds of Ruin Island pottery and associated hearth), to early Euro-American contact (denoted by a few trade-iron objects). Finds from these houses are contrasted with the historic occupation at lita (Etah), where the assemblage is dominated by industrial trade items.

[146] *Second Organizer*

**LeMoine, Genevieve [146]** *see LeMoine, Genevieve*

**Lenik, Stephan (Syracuse University)**

[140] *A Frontier Plantation on Dominica, West Indies: The Jesuit Estate at Grand Bay, 1748-1763*  
Although the Caribbean island of Dominica was officially "neutral" until 1763, it was a frontier region which attracted a variety of people, including maroons, French squatters, and the Amerindian Carib. From 1748 until the early 1760s, Jesuits from Martinique operated a plantation and church at Grand Bay on the south coast. French Jesuit properties were lost when the Society was suppressed in 1762, and the British took Dominica in 1763 after the Seven Years War. Archaeological and historical data permit exploration of the borderland processes among people living on this frontier plantation.

**Lerner, Shereen (Mesa College)**

[188] *Archaeology Goes to the Movies*

Through the medium of box office movies and television, the appeal that indigenous cultures, human evolution, prehistory, and archaeology have for popular culture will be explored. Classes that incorporate this kind of media (such as "Archaeology Goes to the Movies") offer students the opportunity to learn about the real world of archaeology in contrast to the way it is portrayed in popular film. This is achieved by viewing popular films and television episodes that feature anthropologists and archaeologists and pairing those films with relevant readings from the professional literature.

[57] *Discussant*

**Leska, Amy (ARARA)**

[67] *Newberry Cave, Mojave Desert, California: a Fresh Look at Newberry Cave and Its Paintings*  
Newberry Cave, located in San Bernardino County, CA, is home to the only known green pictographs in the Central and Eastern Mojave Desert. These archaic pictographs mimic the only split twig figurines found in California in a rare occurrence of the two at one site. The rich artifact assemblage adds context to the split twig figurine tradition. Pigment stones found in Newberry Cave match the paint on the walls and some artifacts. New examination under a scanning electron microscope, obsidian hydration tests, and a full recording of the rock art yields more detailed information on a truly unique place.

**Lesure, Richard (UCLA), Aleksander Borejsza, David Carballo and Jennifer Carballo**

[20] *The Formative Sequence of Central Tlaxcala*

Based on fieldwork conducted in Central Tlaxcala from 2000 to the present, we describe a revised Formative sequence for the region. Our work substantiates previously established ceramic complexes, but we revise dating of the associated phases. Correlations with the

Formative sequence of the Basin of Mexico bolster our revisions for Tlaxcala. Drawing on geoarchaeological data of human impacts on the local landscape and excavations at four Formative sites, we sketch the history of a millennium of human settlement in our area from the earliest appearance of agriculturalists (900 B.C.) to population disruptions associated with the rise of Teotihuacan (A.D. 100).

**Leullier Snedeker, Natasha (University of Calgary)**

[101] *The Power of Human Imagery: Insights on the Social Dynamics of Pacific Nicaragua*  
In Central America, one of the most compelling forms of visual culture is to be found in human imagery through statues and figurines. These diverse and dramatic representations of humanity have been recovered throughout Pacific Nicaragua during the 19th and 20th centuries, but also through professional archaeological endeavours in the past decade, at sites such as Tepetate and Santa Isabel. Anthropomorphic images are not only revealing products of social existence and mental constructs, they are also strong agentic tools that can provide insight into ideological and political dynamics that often lead to important correlations regarding populations occupying surrounding regions.

**Leullier Snedeker, Natasha [101] see Leullier Snedeker, Natasha**

**Leveillee, Alan (PAL)**

[153] *Applied Anthropology and Landscape Animism*  
This paper concerns archaeological excavation and interpretation of Transitional Archaic secondary burial places in southern New England. Data are interpreted as it reflects ideology and continuity of perceived sacred places bridging several millennia.

**Levine, Abigail [174] see Williams, Patrick Ryan**

**Lev-Tov, Justin (Statistical Research, Inc.) and Sarah Wollwage (Statistical Research, Inc.)**

[41] *Mission Period Impacts on Hunting and Fishing along Santa Monica Bay, Southern California*  
Nearly twenty years of archaeological research in the Playa del Rey area of Los Angeles has accumulated a wealth of data about prehistoric settlement. Two large sites, one a Native American burial area, the other a living area, were in use through the Mission period. Faunal remains demonstrate clear dietary changes from earlier periods. The primary changes from the prehistoric to historic period are intensive deer and sea mammal hunting, and offshore expeditions for pelagic fish, access to European weapons, or the introduction of European plants and animals.

**Levy, Janet (UNC at Charlotte) [104] Discussant**

**Lewis, Clifford (Edwards-Pitman Environmental, Inc.)**

[80] *Prehistoric Pottery from the Long Swamp Site (9CK1)*  
In this paper the pottery assemblage from recent excavations at the Long Swamp Site (9CK1), Cherokee Co., Georgia, is described and the results of analysis presented. Analysis of the pottery facilitated the creation of a ceramic chronology that was used to place the site into the larger cultural landscape of prehistoric northwest Georgia.

**Lewis, Matthew [43] see McElroy, Stephen A.**

**Lewis-Williams, David**

[109] *Surfing Cosmological Boundaries*  
The act of making rock art images was, for the southern African San, in some ways equivalent to the medicine (or trance) dance, their principal ritual. The images opened up passages in the rock face for shamans (lgi:ten) to follow through into the spirit realm. There they cured the sick, made rain, and fought off malignant spirits. The painted images were a way of linking two realms, the material world and the spirit realm and of displaying the power of the shamans.

**Lillios, Katina**

[138] *Excavations at the Neolithic-Bronze Age burial of Bolóres (Torres Vedras, Portugal): A contribution toward the study and analysis of collective tombs*  
The excavation and analysis of collective tombs used over many generations, which typify the Neolithic of Western Europe, pose significant challenges to archaeologists. In order to improve methods for data recovery and analysis and, ultimately, contribute toward our understanding of the dynamics of culture change in the Portuguese Estremadura between the Neolithic and Bronze

Age, interdisciplinary excavations were directed by the author in 2007 and 2008 at the rockshelter site of Bolóres (Torres Vedras). Preliminary results from these two seasons of work and plans for subsequent seasons will be presented.

[138] *Second Chair*

**Lim, Sangtaek [167]** *see Kim, Jongil*

**Lin, Sam (University of Auckland), Matthew Douglass (University of Auckland) and Simon Holdaway (University of Auckland)**

[145] *The Application of 3D Laser Scanning Technology to the Assessment of Ordinal and Mechanical Cortex Quantification in Lithic Analysis*

A 3D digitiser is used to construct models of experimental lithic reduction sets. High-resolution measurements concerning cortex area are extracted from the models and compared with measurements obtained through ordinal and mechanical approximations of cortex proportion. A considerable degree of error exists in the approximations due to over and underestimation in surface area. However it is shown that representativeness of the estimates improves significantly as sample size increases. Results are discussed in relation to recent studies by Dibble and colleagues (2005) and Douglass and colleagues (2008) that use cortex proportion as part of a proxy measurement for assemblage-scale curation.

**Lincoln-Babb, Lorrie (BIOARCH, L. L. C.), John McClelland (University of Arizona), Shari Tiedens (Statistical Research, Inc.) and Willa Trask (Statistical Research, Inc.)**

[43] *Diet and Nutrition on the Frontier: Dental Health in 19th Century Tucson.*

As a frontier settlement in the American Southwest, 19th century Tucson was a multi-ethnic community with strong ties to colonial Mexico and local indigenous populations. Dental health is strongly influenced by diet, which can in turn reflect other factors, such as culinary preference or ethnicity. In this paper, we present the preliminary results of an investigation of dental health in the burial population of Tucson's National Cemetery. We infer social and dietary differences within the burial population by evaluating patterns in dental wear, tooth decay, and evidence for professional dental care.

**Lindner, Christopher (Bard College) and Trevor Johnson (University of Massachusetts - Boston)**

[53] *Guinea in Hyde Park: An Early Free Black Community in the Hudson Valley*

The Guinea Community, in Hyde Park, New York, home to some 40 families of free Blacks and fugitive slaves, from approximately 1790 through 1850, presents an opportunity to study the formation of a northern African-American community living for the first time outside the constraints imposed by slavery. The project's preliminary results are interpreted comparatively to argue for the vital role played by material culture in the construction of free African-American identities during the process of gradual abolition in New York State. Three seasons of archaeological excavation at Guinea, together with extensive preliminary documentary research, suggest that the community's residents participated actively in local and international consumer markets. There is evidence that some of the people from Guinea community were well respected by members of Hyde Park's affluent White society. In this poster, the maps, photos, and narratives provide an introduction to the Guinea Community Archaeological Project.

**Lindsay, David (Society for American Archaeology) [120]** *Discussant*

**Lindstrom, Katie (University of Wisconsin)**

[136] *Inscribed Pottery from Gola Dhoro: New Data on the Indus Script and the Social Power of a Small Harappan Town*

During the Indus, or Harappan, Civilization writing integrated diverse communities and conveyed social power. Traders and merchants from large urban centers signaled control of certain mercantile activities through formal writing on seals and tablets. However, my analysis of inscribed ceramic vessels from Gola Dhoro (India) shows that writing was also used informally. At this small, walled, craft producing community people inscribed both Harappan and non-Harappan style vessels with Indus script. These data are compelling evidence that writing was not simply an elite means of communication, but was also accessible to inhabitants of small towns with strong ties to local traditions.

**Linduff, Kathryn (University of Pittsburgh) [16]** *Discussant*

**Lineberry, David (Edwards-Pitman Environmental Inc.)**[80] *Ceramic Objects from Long Swamp (9CK1)*

Excavations recently undertaken at the Long Swamp Site (9CK1) in Cherokee County, Georgia, revealed a portion of a village dating to the Early Etowah phase. The recovered artifacts included a large number of ceramic finds consisting of potsherds and objects. This paper will present the Long Swamp ceramic objects, compare them to other previously recovered objects in the region, and discuss their place within the ceramic tradition of the Southeast.

**Lipe, William D. [18]** see Wyatt, Scott D.; **[37]** see Collins, Mary B.; **[164]** see Kemp, Brian M.; **[164]** see Nott, BreAnne M.

**Lipo, Carl (California State University Long Beach), Brooke Hundtoft (University of Arizona) and Terry Hunt (University of Hawai'i, Manoa)**[44] *Analyses of Stylistic Variability among Stemmed Obsidian Artifacts on Rapa Nui (Easter Island).*

The diverse shapes of stemmed obsidian artifacts (mata'a) from Rapa Nui have long been suggested to represent idiosyncratic and non-patterned behavior. Here, we present analyses of measurements consisting of descriptions of mata'a variability that are potentially heritable and free to vary due to individual preferences. Due to the nature of their construction, these measurements are explicable as the results of patterned cultural transmission across space and through time. Using seriations constructed from multiple classifications and descriptions of mata'a from locations across Rapa Nui, we identify patterns of spatial organization among prehistoric populations of the island.

**Lipo, Carl [58]** see Safi, Kristin N.; **[53]** see Page, Andrew J.; **[127]** see Hunt, Terry L.; **[29]** see Bardsley, Andrea

**Lippert, Dorothy (National Museum of Natural History) [22]** *Discussant*

**Lippi, Ronald (University of Wisconsin--Marathon) and Alejandra Gudiño (University of Missouri--Columbia)**[191] *Inka*

Inka expansion into northern Ecuador is best known archaeologically and historically for the Andean highlands through such important work as that currently underway at Pambamarca, but the expansion was not limited to the highlands. Work at the rainforest site of Palmitopamba on the Andean western slope is revealing intriguing evidence of a special relationship, not necessarily bellicose, between the indigenous Yumbos and the foreign Inkas. This montaña perspective enhances our understanding of imperial expansion ca. 1500 in northern Ecuador, complicates simple expansion models, and suggests avenues of inquiry that could benefit researchers throughout the area.

**Little, Aimeé [91]** see Cooney, Gabriel

**Little, Barbara [7]** *Discussant* **[120]** *Discussant* **[186]** *Discussant*

**Little, Keith [80]** *Discussant*

**Littman, Ali**[52] *The Johnston Site Modified Bone Assemblage: New Insights About the Monongahela*

One of the better known attributes of Monongahela sites in western Pennsylvania is the presence of a significant amount of modified bone. During past studies of assemblages from Monongahela villages, these items have been noted, but little analysis has been conducted. The Johnston site (36IN2) which is located in Indiana County, Pennsylvania provides an example of this. However, new techniques for the analysis of modified bone and bone tools have been developed by zooarchaeologists in recent years allowing better understanding of manufacturing techniques and tool usage. Application of these techniques is providing new perspectives on the Johnston site.

**Livingood, Patrick (University of Oklahoma)**[40] *Down the River and Through the Woods: Cost-Distance Calculations of Travel Time in the Mississippian*

This paper will use calculations of travel times between sites derived from GIS data to reanalyze cases in Mississippian archaeology in which straight-line distance has played a prominent role. The case studies include the south Appalachian sites studied by David Hally and the fall-off curve of Mill Creek hoe distribution in the Central Mississippi Valley. Additionally, this paper will discuss the challenges of modeling waterborne travel in the Eastern woodlands such as developing an

appropriate rate of speed using modern and historic sources and creating realistic travel models using available geographic datasets.

**Livingood, Patrick [53]** *see Regnier, Amanda L.*

**Liwoz, Chester (Kenyon College)**

[114] *Household and Community at Terminal Classic Las Canoas, NW Honduras*

Household form, size, and function are conditioned by a variety of factors among which is the domestic group's position within the larger community in which it is embedded. This paper examines the history of a household situated on the east margin of Las Canoas, a medium-size Late and Terminal Classic (AD 600-950) center within the middle Rio Chamelecon drainage. Particular attention is paid to the manner in which members of this social group adapted to, and helped shape, processes of political centralization and craft specialization operating at the community level.

**Locascio, William (University of Pittsburgh) [65]** *Evaluating the Nature of Social Inequality at the Community Level*

Ethnohistoric accounts and mortuary data that attest to patently hierarchical social organization in the prehispanic Intermediate Area represent only the most ostentatious expressions of inequality. Status differences among individuals involved in daily interactions within communities in the region were surely not as conspicuous. This paper examines household and community-level data from elite and non-elite contexts at three chiefly centers in Lower Central America/Northern South America. Patterns that emerge between elite and non-elite contexts are compared across cases and the results are used to support broader conclusions regarding the expression and nature of social inequality at smaller scales of interaction.

[65] *First Chair* [65] *Second Organizer*

**Lockard, Gregory (COLP S.A.C.)**

[157] *From the Highlands to the Coast: Preliminary Results of the PERU LNG Archaeological Project*

This paper presents the preliminary results of the archaeological program of the PERU LNG Project, which is the largest private investment project in the history of Peru. The pipeline extends approximately 408 km from the highland town of Chiquintirca in Ayacucho to Pampa Melchorita on the Pacific coast. A total of 115 sites were rescued in the original ROW, as well as several additional sites within pipeline variants. A wide variety of different sites were investigated, from small artifact scatters along the desert coast to a Wari secondary administrative center in the Ayacucho highlands.

[157] *First Chair*

**Lockwood, Christopher (University of Washington)**

[127] *Chemical Identification of Animal Pens in Kohala, Island of Hawai'i*

Traditional Hawaiian feasting involved consumption of vast quantities of food, including (on some occasions, at least) huge numbers of pigs. Despite the economic and ritual importance of these animals in precontact Hawaiian culture, very little is known about methods of animal husbandry. Were pigs raised in pens, or were they kept away from crops and other foodstuffs by another means? Sediments from possible animal pens were analyzed by two methods -- X-ray fluorescence and gas chromatography-mass spectrometry -- for chemical traces of animal residues.

[127] *First Chair*

**Loebel, Thomas J. [190]** *see Hill, Matthew G.*

**Loffler, German (Washington State University)**

[77] *Microchipping attributes of transport, cutting, and whittling actions on flake tools of three different lithic materials*

Microchipping attributes from two activities—cutting and whittling—are distinguished from microchipping attributes from transported flake tools. Microchipping attributes of three different lithic materials are compared—obsidian, chert and mudstone. An objective methodology for identification of microchipping attributes in transport, cutting, and whittling activities is developed. Microchipping attributes on transported flakes are influenced by flake tools transported distance, number of flakes carried, and lithic material of the flake. These findings are applied when analyzing the flake tools from Sunken Village (35MU4), near Portland, Oregon.

**Logan, Brad (Kansas State University)***[29] Housekeeping in the Central Plains: Spatial Analysis of Late Prehistoric Lodges*

Identical recovery methods applied during excavation of two houses in different regions facilitate definition and interpretation of Central Plains tradition (~AD 1000-1500) domestic activities. Phil house is in the mixed grass prairie of north-central Kansas; Scott house is in the oak-hickory/tall grass prairie ecotone of the northeastern Kansas. Calibrated radiocarbon dates indicate 14th century AD residence of both. Both structures had comparable form (square), construction (wattle and daub), and area (~50m<sup>2</sup>). Each burned preserving some structural supports attesting wood selection and design. Lithic tools and debris, ceramics, organics (wood, bone, shell), hearthstones, and daub are interpreted as to frequency, mass, preservation, and spatial distribution. Patterns reflect use areas (particularly lithic tool finishing and maintenance), loss/discard, traffic, and structural collapse. Unlike Phil, the Scott house had been cleaned prior to burning.

**Logan, Melissa***[73] Changing Clothes: A Reinterpretation of the Quechquemilt in Late Formative West Mexican Imagery*

A garment seen on many Late Formative west Mexican human effigies has been identified as a quechquemilt, especially on figures with female sex characteristics. Closer examination indicates this garment may have been misidentified. It is more likely the clothing being depicted is a tilmatl. Similarities between the construction, decoration, and display of the west Mexican garment and the Aztec tilmatl suggests it was used to signal social status. Interpreting the garment as a tilmatl, rather than a quechquemilt, opens a window into social relationships, particularly related to gender, and sociopolitical complexity in regions where the tilmatl is prevalently displayed.

**Logeson, Hayley (University of North Florida)***[32] Ceramic Hand Drums and Their Role in Funerary Processions at Paquime*

In DiPeso and colleagues' original report of the excavations at Casas Grandes (Paquime), he noted the unique presence of ceramic hand drums within Unit 13. Not only were the majority of drums found at Paquime located within this unit, but not a single drum in Unit 13 was found intact. Furthermore, the majority of these drum fragments came from multiple proveniences, suggesting intentional breakage and scattering. This poster examines DiPeso's assumptions regarding the use of these hand drums in funerary processions. Specifically, I track patterns of distribution among the rooms of Unit 13 and identify possible routes of processions.

**Lohse, Jon (Texas State University), Charles Frederick, Jim Mead (Eastern Tennessee State University), Jon Lohse (Center for Archaeological Studies, Texas State University-San Marcos), Lorena Paiz and Lorena Paiz (Vanderbilt University)***[89] Preliminary Results from the 2009 Season of Multidisciplinary Research at Chivacabe, Guatemala*

Chivacabe, located in the western Guatemala highlands, contains a robust deposit of Pleistocene fauna. The site has also yielded possible evidence for human occupations that may date as early as the Terminal Pleistocene. Research was carried out in 2008-2009 to begin documenting the site from an archaeological, paleontological, and geomorphological perspective. This poster describes some of the initial results of this work, and places Chivacabe in a larger Early Paleoindian context for southern Mesoamerica.

**Lohse, Jon [89]** see *Lohse, Jon C.*

**Loizou, Nicholas***[28] Entomology and archaeology – The effects of carbon dioxide on larval development*

The following paper will discuss the effects of increased carbon dioxide levels on the activity of fly larvae at a corpse. Entomology studies the behaviour of insects, in the case of forensic entomology this is related specifically to behavioural traits of insects in relation to a corpse. This study looks primarily at the function of fly larvae upon infestation of a corpse. In general flies are the first of a succession of insects to visit a corpse and their larvae can be used to determine the length of time a corpse has been exposed, with the purpose of estimating the time since death. Although the behaviour of larvae is affected by a number of factors this study relates to the inhibition in activity caused by increased carbon dioxide levels, such an occurrence could be related to situations where a corpse is buried in an environment deficient in oxygen and is proportional to the number of larvae present.

**Longstaffe, Fred J. [68]** see *Howie, Linda*; **[130]** see *Webb, Emily C.*

**Lopez, Anthony** [34] *see Berg, Caryn M.*; [34] *see Reed, Karen*

**Lopez Bejarano, Gino** [119] *see Davis, Katharine M.*

**Lopez Bejarano, Jose Maria (University of Pennsylvania)**

[119] *Settlement Patterns and Inca Sacred Shrines in the Lake Titicaca Basin: Results of an Archaeological Survey of the Copacabana Peninsula, Bolivia*

Inca ideology has often been characterized by the domination of preexisting sacred places. Shrines such as Pachamac, Tiwanaku, and Copacabana, were co-opted and subsequently used politically as a means of legitimizing sovereignty and control over other Andean societies. Through this strategy the Inca were able to materialize their cosmology and mythic history in the conquered regions. Furthermore, the appropriation of important pan-Andean sacred places necessitated transformations of local landscapes and involved the creation of a massive administrative infrastructure. This paper will discuss the varied ways the Inca modified preexisting shrines, and thus re-altered the landscape of the Copacabana Peninsula, Bolivia.

**Lopez Corral, Aurelio (Penn State University)**

[20] *Climate variability and household food production in Late Postclassic- Early Colonial Tepeaca, Mexico*

Mesoamerican archaeologists find it difficult to estimate pre-Hispanic agricultural productivity due to poor archaeological evidence on agricultural features and cropping techniques. Researchers have estimated maize yields in various regions but most of them in relation to intensification and innovation strategies. Fewer studies consider regional climate variability as an important yet unpredictable constraint to crop production. This paper discusses crop production variability in the Tepeaca region in terms of indigenous agricultural practices and regional environmental setting and climate variability. The socio-economic implications of household food procurement and underproduction are analyzed with relation to the broader regional political economy.

**López Luján, Leonardo (Museo del Templo Mayor, INAH)**

[38] *Introduction: the Earth Goddess Tlaltecuhli Monolith and the Seventh Field Season of the Proyecto Templo Mayor*

The Proyecto Templo Mayor of the National Institute of Anthropology and History was created in 1978 by Eduardo Matos. After thirty years of uninterrupted work in the sacred precinct of Tenochtitlan, we have exhumed the ruins of the Templo Mayor and 14 adjacent buildings, as well as numerous sculptures, mural paintings and 148 offerings. The project data and analysis have resulted in over 400 publications. This introductory paper will give a general view of the objectives and first results of the project's seventh field season (2007-2010) and it will discuss the functions and significance of the new Earth Goddess monolith.

[38] *First Chair*

**López Varela, Sandra (U. Aut. Estado de Morelos)**

[110] *New routes for characterization studies: analyzing the process of modernity*

At Cuentepec, a woman spends part of her day in a wattle and daub house making clay griddles that are placed over a hearth to cook hand-made tortillas, an ancestral component of Mexican cuisine. Nearby, the inhabitants of the city of Cuernavaca are heading to the supermarket to buy plastic bagged tortillas that later will be heated on a metal plate over a gas or electric stove. In facing modernity, pottery technologies are rapidly transforming and unsuccessfully adapting to the new challenges that are promising to combat poverty. Characterization studies are used here to record the efficiency of such programs.

**Lopiparo, Jeanne (Rhodes College)**

[114] *House, Community, Polity: Materiality and Social Identity in the Classic Period Ulúa Valley, Honduras*

Research in the Ulúa Valley, Honduras has demonstrated a fundamental link between material culture production and physical and metaphysical reproduction. Burials, offerings, and structural renovations during the Classic Period constituted rituals of renewal that were maintained in the social memories of inhabitants through participation in life-cycle events. Rituals prominently incorporated ceramic artifacts that were crafted by local communities and that demarcated social identities in their figural representations, styles, and production techniques. These practices inscribed social identities and affiliations among households, communities, and polities, creating a landscape in which sites at multiple scales were nodes in complex webs of social relations.

**Lopiparo, Jeanne [117]** *see Maldonado, Doris*

**Lord, Alan [138]** *see Dambeck, Rainer*

**Lotti, Teresa**

[80] *Everything but the Kitchen Sink: GPR, Mag, High Definition Scanning, and Aerial Photography at Site 9CK1*

This paper will discuss the use of geophysical techniques, aerial photography, and high definition scanning at the Long Swamp Site, 9CK1, in Cherokee County, Georgia. The discussion will outline the positive results of the geophysical work, previous to archaeological investigations, and relate them to feature identifications after ground truthing. This paper will also include the benefits of high definition scanning, especially when tying features into the overall site grid and virtual structure reconstruction.

**Loubser, Johannes (Stratum Unlimited, LLC)**

[172] *Ball court petroglyph boulders at PO-29*

Of the 26 boulders with definite signs of petroglyphs from PO-29, 13 came from the north wall, 6 came from the west wall, 5 came from the south wall, and 1 came from near a modern road. The stelae-like petroglyphs from the north wall are the most elaborate, 5 of which have upside-down faces buried below the level of the ball court. When the boulders are inverted new images become apparent. Taphonomic factors, indicative of post-production use and alteration, are discussed. The boulders become meaningful when viewed in the light of early Spanish chronicler accounts.

[84] *Discussant*

**Louden, Elizabeth I. [134]** *see Sabom Bruchez, Margaret*

**Loughlin, Michael (University of Kentucky)**

[148] *The Tres Zapotes Regional Polity: A View from the Hinterland*

By the Late Formative period, Tres Zapotes established itself as the political and economic head of a regional polity in the Eastern Lower Papaloapan Basin. This paper presents a view of the Tres Zapotes polity from the perspective of El Mesón, a secondary center located approximately 13 km north of Tres Zapotes. Recent archaeological survey suggests that while El Mesón was politically and economically tied to the larger center, this control was not absolute. Rather, the data suggest that El Mesón was able to maintain some degree of independence that allowed it to survive and prosper following Tres Zapotes' decline.

**Lowe, Lynne (Centro de Estudios Mayas, UNAM) and Bruce Bachand (New World Archaeological Foundation, Brigham Young University)**

[36] *Exploración de un basurero del periodo Formativo Medio en Chiapa de Corzo, Chiapas*  
Durante la temporada 2008 realizada en el sitio arqueológico de Chiapa de Corzo, fue explorado un pozo de basura del periodo Formativo Medio (1000-600 a.C.), que incluía abundantes tiestos, carbón, fragmentos de figurillas, huesos de animales y otros artefactos, además del cuerpo de un figurilla tipo "baby-face", de estilo olmeca. Aunque se han reportado basureros semejantes en otras regiones de Mesoamérica, éste representa un hallazgo único en el occidente de Chiapas, y brinda la oportunidad de analizar un conjunto primario de desechos tempranos que aportará información sobre la dinámica cultural del sitio y sus relaciones con la Costa del Golfo.

**Lowe, Lynne S. [163]** *see Sellen, Adam T.*

**Lowry, Justin (U Albany, SUNY)**

[19] *GIS at Xuenkal: Laying down the framework for Geodatabases with a case study from the Late Preclassic*

GIS applications in archaeology have been used with a major focus on data presentation and sharing. This presentation reviews how these applications can be integrated into all areas of archaeological research with a strong focus on iterative analysis as well as data management. This presentation will review the process of generating a GIS database for archaeological research, problems we have encountered, and workarounds for common issues. Finally, test pit data from the Xuenkal archaeological project will be analyzed using spatial statistics in arcGIS to determine a minimum level of Late Preclassic occupation of the site.

[19] *First Chair*



**Lozada, Maria (University of Chicago)**

[162] *Structured Instruction: Top-Down/Bottom-Up Learning*

A central goal for archaeological research is the propagation of knowledge gained through fieldwork. The multidisciplinary field school at the Tarapaca Valley in northern Chile was organized according to the principle that archaeological knowledge should be distributed at all levels. Student/Faculty ratios are kept low (rarely more than 1:4) and student participants are broken down into teams that rotate through each module of the research program. Staff discussions on research progress take place daily with student participation so that they are exposed, not only to the process of data collection, but the decision making at all levels.

**Luan, Fengshi [145] see Cunnar, Geoffrey E.**

**Lucero, Lisa (University of Illinois at)**

[161] *Cooperation, Ritual, and the Emergence of Classic Maya Rulers*

For emerging Maya rulers, the participation and cooperation of people was achieved through sponsoring public rituals. But not just any rituals; aspiring leaders used traditional rites writ large as an integrative tool since such rituals situated political change within familiar social constructs. Public ceremonies thus promoted solidarity—and political agendas. Maya commoners could withdraw their support if rulers failed to fulfill their promises to reach the gods to bring forth bountiful harvests, as was the case at the end of the Classic period (c. 850-950) when rulers in the southern lowlands lost people's support and all but disappeared.

**Luchsinger, Heidi (East Carolina University), Gustavo Martínez (INCUAPA, Departamento de Arqueología, Facultad de Ciencias Sociales, Universidad Nacional del Centro de la Provincia de Buenos Aires) and María Gutiérrez (INCUAPA, Departamento de Arqueología, Facultad de Ciencias Sociales, Universidad Nacional del Centro de la Provincia de Buenos Aires)**

[130] *Geoarchaeological Correlation of Archaeological Sites at the Paso Otero Archaeological Locality (ca. 10,500-2,700 14C Years BP) in the Southeastern Pampas, Argentina*

Four archaeological sites from the Paso Otero archaeological locality were excavated along the Middle Río Quequén Grande River (Argentina) and date from ca. 10,500-2,700 radiocarbon years BP. Although excavation results clarified the stratigraphic and chronological context of each site, their precise correlation and position within the regional landscape needed to be better understood. Recent geoarchaeological investigation at the Paso Otero locality began in March 2008. Based on stratigraphic analysis as well as particle size and micromorphological analyses, this investigation has expanded to clarify the chronological and stratigraphic correlation of all four sites to each other and the regional landscape.

**Lukowski, Susan (Washington State University) and Colin Grier (Washington State University)**

[41] *Zooarchaeological Investigations of Household Economics at the Dionisio Point Site, southwestern British Columbia, Canada*

Notions of complexity on the Northwest Coast rely heavily on the perceived economic organization of households and village sites. While archaeological data have been derived from a number of village contexts over the last few decades, fine-grained zooarchaeological analyses remain less common at such sites. Here, new faunal data from the Marpole-age Dionisio Point site (DgRv-003) on Galiano Island in southwestern British Columbia are presented, allowing a higher resolution view of the complexity of household economics some 1500 years ago. These data complement and expand our view of the site and pre-contact Northwest Coast subsistence, seasonality and household structure.

**Luley, Benjamin (The University of Chicago)**

[96] *Coinage at Lattara. Using archaeological context to understand ancient coins.*

The Celtic-speaking town of Lattara (modern Lattes) in Iron Age southern Gaul was an important center of sustained colonial interaction with Etruscans, Massalian Greeks, and Romans. One of the important consequences of these encounters was the introduction of coinage. Through an examination of the archaeological context of coins, I investigate how the use and value of money changed at Lattara after the Roman conquest. I suggest that the incorporation of coinage into systems of transactions at Lattara was related to its expedience as a standardized form of value, which facilitated exchange between the inhabitants of the town and foreign merchants.

**Luna, James (Luiseno/La Jolla Tribe)**

[112] *James Luna, American Indian Contemporary Artist*

It is not that I am against anthropologists as they have their job and I have mine. I will present art works that deal with Indians and issues I have with anthropologic notions that have seeped into the American way of thinking concerning ethnicity. Seemingly, some of these notions distort and romanticize who we really are. You will be confronted and asked to reconsider and perhaps question your own identity. I will do this with great care, a touch of satirical humor from an insider's view, as I want to consider our similarities prior to considering our differences.

**Lunagómez Reyes, Roberto [73]** *see Wendt, Carl J.*

**Lupo, Karen [145]** *see Kiahtipes, Christopher A.*

**Lutz, Shane (George Washington University) and David B. Small (Lehigh University)**

[64] *Ancestor Cults in Second Phase Occupations. New Questions and Strategies*

Mesoamerican scholars have often identified ornate centrally located structures as buildings for ancestor veneration. At the Honduran site of "Sky Witness" we have identified a probable center courtyard ancestor building. The association of this building with a definite secondary phase of construction of the site however, challenges the current thinking that these veneration buildings are tied to founders and therefore built in the initial phase of site occupation. This late building allows us to investigate important changes in site composition and social strategies and suggests a new way of considering ancestor veneration within sites.

**Luzzadder-Beach, Sheryl (George Mason University) and Timothy Beach (Georgetown University)**

[158] *A tale of two wetlands: water chemistry and palaeoecological comparisons in northern Belize*

We present two new sets of palaeoecological and water chemistry data to understand ancient Maya wetland use in northern Belize. Pollen and other paleo-proxies indicate that Chan Cahal was a well-drained upland with extensive maize agriculture in the Archaic to Preclassic. With groundwater rise, this area became a wetland in the Preclassic, and Maya farmers drained the area to grow maize and other crops, and manage the area's highly mineralized water. A nearby field system, Birds of Paradise, reveals an abrupt changeover in the Classic from a forested grassland to nearly complete dominance by Marantacea in the Postclassic.

**Luzzadder-Beach, Sheryl [158]** *see Beach, Timothy*

**Lycett, Mark T. [18]** *see Rozo, Jennifer L.*

**Lyman, R. (University of Missouri Co)**

[44] *Graphing Evolutionary Pattern in Stone Tools to Reveal Evolutionary Process*

An old cliché is that "a picture is worth a thousand words." Evolutionary biologists, paleontologists, and archaeologists have developed many styles of graph to depict evolutionary patterns. There has been minimal cross-disciplinary pollination with respect to these graph styles. Typological and metric data for projectile points from Mummy Cave, Wyoming, illustrate that different graph styles reveal different aspects of evolutionary patterns and, in combination, imply responsible evolutionary processes. Graphing the same data multiple ways facilitates avoidance of the pitfall of inferring process solely on the basis of one pattern.

**Lyman, R. Lee [44]** *see Van Pool, Todd L.*

**Lynch, Maureen (California State University Long Beach)**

[58] *The Effects of Moisture on Ground Penetrating Radar in La Blanca, Guatemala*

La Blanca is a Middle Formative site located along the Pacific Coast of Guatemala, near the Mexican border. In a 2008 geophysical survey, the SIR-3000 Ground Penetrating Radar was used as a means of revealing architectural information about the site that may remain below the surface. Conducted during the rainy season, high amounts of moisture and precipitation interfered with the data collected during the GPR survey. In order to maximize the potential of the data collected, a series of filters available in the GPR Slice program were used as a means of refining the data collected by the unit.

**Lynott, Mark**

[152] *2008 Embankment Wall Research at the Hopeton Earthworks, Ohio*

Radiocarbon samples from contexts associated with wall construction activities indicate the landscape at the Hopeton Earthworks was built between A.D. 75 and A.D. 200. Middle Woodland people moved more than 30,000 cubic meters of soil, and stripped the topsoil from nearly 40 acres in creating this geometric earthen enclosure. Excavations in 2008 provide evidence that the rectangular and circular enclosure walls were built as a single unit. Comparison of wall construction methods between earthwork sites indicates that although some characteristics of wall construction were likely common to most sites, each embankment site was unique.

**Lyon, Eugene**

[171] *Florida Outreach*

The Florida Adelantado, Pedro Menéndez de Avilés, whose granted territories stretched from Newfoundland to the Florida Keys, sailed in 1565 to found St. Augustine and expel the Frenchmen who had settled in Florida. He built his capital at Santa Elena on Parris Island and from there sent expeditions to the Appalachians and the Chesapeake. Menéndez established relations with Native American groupings in his wide territories. Fort-missions were constructed around the Florida perimeter. The Jesuit missions failed and Menéndez could not adequately support his colonial enterprise. But St. Augustine remains the oldest continually occupied city in the United States.

**Lyons, Patrick (Arizona State Museum) and Jeffery Clark (Center for Desert Archaeology)**

[13] *A Community of Practice in Diaspora: The Rise and Demise of Roosevelt Red Ware*

Crown has linked the origin of Roosevelt Red Ware to Kayenta immigrants and has modeled a community of practice that connected immigrants and locals in the context of a cult. Evidence of a more exclusive relationship between Kayenta immigrants and Roosevelt Red Ware production has since emerged. Links among immigrant enclaves and between these dispersed nodes and a broadly conceived northern homeland have also been documented. Kayenta immigrants and their descendants, who made Roosevelt Red Ware, maintained a community of practice in diaspora. Here, we explore the interplay of structure and agency as this community evolved and eventually disintegrated.

**Lyons, Patrick [37]** see *Vokes, Arthur W.*

**Maca, Allan (Colgate University) and Katherine Miller (Arizona State University)**

[68] *Copan's Q'eqch'i Barrio?*

The Copan Urban Planning Project (PAPAC) excavated a tomb west of the Acropolis: a subterranean vaulted chamber, accessed by a 10 foot stone chute, linked to the birth of a Late Classic barrio. The tomb's construction, location, and artifacts are unique at Copan. Bioarchaeological analysis of the interred individual also demonstrate an unusual array of traits, to which we may now add the results of a strontium isotope study that matches this individual to the Pasion River region of the southern Peten. This paper presents these data and discusses their implications.

**MacFarland, Kathryn (University of Arizona)**

[130] *Laterality and Directionality in Pottery Painting and Coiling*

In this project, the consistency of the directionality (clockwise versus counterclockwise) of painted lines and coiled bases on archived pots was studied to determine tolerance within an open or closed cultural learning framework. An experiment was carried out which linked directionality of pots with the handedness of the potter in an open system. These results were then compared with data from archaeological pots from sites in the Point of Pines area, Arizona (AZ W:10:50). Maverick Mountain, Point of Pines Polychrome; McDonald, Point of Pines Corrugated were used to extrapolate artistic tolerance with degrees of variation within and between types.

**Machicado, Eduardo [12]** see *Couture, Nicole C.*

**Machicek, Michelle [63]** see *Johannesson, Erik G.*

**MacLellan, Jessica (Boston University) and William Saturno (Boston University)**

[99] *Change and Continuity in the Preclassic Architecture of the Las Pinturas Group, San Bartolo, Peten, Guatemala*

The site of San Bartolo, in Peten, Guatemala, presents an excellent opportunity to study a medium-size Preclassic Maya center. The Las Pinturas group, in particular, has been investigated heavily, because of the famous murals discovered in a looters' trench there.

Excavations have revealed details of the multiple construction phases at Las Pinturas. In this presentation, the continuity and changes in the architecture are discussed. A tradition of mural painting seems to stretch back to the end of the Middle Preclassic, before an apparent E-group was transformed into a triadic architectural group. Comparisons are made to buildings at other Preclassic sites.

**Macrae, Scott (Trent University), Adam Pollock and Michael Stringer (Trent University)**

[155] *Surveying the Agricultural Landscape: A Review of Methods*

Every archaeological project involved in rural surveys will have to deal with mapping the agricultural landscape. Drawing on the collective experience of surveying terrace systems around the globe, different methods will be explored; examining applicability, effectiveness, efficiency, and cost. These methods involve tape and compass, theodolite, Global Positioning Systems, and satellite imagery. While the primary focus is on terrace farming the experiences can be transferred to the surveying of many other agricultural strategies. This paper focuses on work conducted in Greece on the island of Antikythera and in Belize at the ancient Maya site of Minanha.

**Magnani, Rae [185] see Hageman, Jon**

**Magnoni, Aline (Tulane University), Bruce Dahlin (Ancient Maya Environmental Studies Center), Scott Hutson (University of Kentucky) and Traci Ardren (University of Miami)**

[86] *Urban Identities: Social and Spatial Production at Classic Period Chunchucmil, Yucatán, Mexico*

While some researchers have questioned the degree of lowland Maya urbanism, we show that Chunchucmil was a major urban center, with a population of thirty to forty thousand people and the highest settlement density of any site in the Maya lowlands. Located along a vigorous maritime trade route, it developed as a city in the late Early Classic (AD 400-650) with a complex infrastructure and market economy to accommodate its residents and the influx of rural and foreign visitors. We look at the production and construction of urban spaces by its residents and how these in turn shaped their urban identities.

**Mahar, Ginessa (American Museum of Natural History)**

[46] *Getting it right the first time: Stressing the importance of remote sensing in today's archaeology*

Every year advances in remote sensing technologies influence our approach in North American archaeology; from excavation strategies to overall site analysis. The combination of remote sensing and excavation better equips our endeavors to approach theoretically meaningful questions such as the relation between complexity and community structure as well as site history and formation. This paper investigates this relation by presenting data from recent remote sensing surveys and excavations at two shell ring sites on St. Catherines Island, GA - including information gathered through gradiometry, soil resistivity, ground penetrating radar, shell density and topography surveys.

**Maher, Ruth (The Graduate Center, CUNY)**

[25] *The Spaces of Death: The Ins, the Outs and Beyond*

The Icelandic Viking Age landscape is somewhat unique in that there were no permanent inhabitants in Iceland prior to the Norse arrival in 874 CE. This allowed the settlements as well as the burials to be placed in locations of significance to the group, rather than having to conform to an existing mortuary landscape. These burials represent a small window of time, approximately 125 years, and creates an opportunity to shed light on the social and political ideology of the group based on their ability to define an "empty" landscape with their dead.

**Majewski, Teresita (Statistical Research, Inc.)**

[37] *Not Just the End Game Anymore: Proactive Budgeting for Project Curation Needs in a Changing Archaeological World*

More often than not, the curation of recovered collections is an afterthought, both for those who fund archaeology and for those carrying it out. Minimal consideration is given to the impact of prefield and field decisions on the artifacts recovered, processed, analyzed, prepared for curation, and ultimately curated. The nationwide curation crisis forces the realization that the responsible treatment of archaeological collections begins when clients first contemplate a project and continues throughout a project's duration and beyond. Actual examples of budgeting for curation costs consider requirements such as in-field recording, sampling, conservation, digital archiving, and curation in appropriate repositories.

**Makibayashi, Keisuke**

[167] *The transformation of agricultural culture landscape in Neolithic Changjiang downstream basin*

This paper discusses on the transformation of agricultural landscape in Neolithic Changjiang downstream basin, southern China. Any agricultural system is not only a complex of cultivating technologies, but should be considered as a complex in which both a cultivation system and a cooking/serving system are combined. Under this point of view, it will address that the cultural landscape mainly determined by its given natural surroundings in early Neolithic transformed into a more complex landscape in which socio-cultural factors performed a more crucial function in late-Neolithic, Songze Culture onwards.

**Makowski, Krzysztof (PUCP Perú)**

[15] *The ritual war and the military conquest: a view from the Moche frontiers*

The results of the "Alto Piura" and the "Culebras Valley" Projects and the studies on Moche iconography suggest that the frontiers were defended by the network of alliances sealed by common supraethnic warriors rituals instead a fortified - like the Roman limes - border. So the ritual war and the conquest war don't exclude one another in the context of the archaic state, incipient military technology, and particular warrior ethos.

**Malatesta, Jonathon [83]** *see Repussard, Antoine*

**Maldonado, Doris (UC Berkeley), Jeanne Lopiparo (Rhodes College) and Shanti Morell-Hart (UC Berkeley)**

[117] *The Creation of Place at Currusté, Honduras in the Past and the Present: Archaeology and Public Interpretation*

Recent investigations at Currusté, a Classic period center in the Ulúa Valley, Honduras, focus on the interpretation of the site for professional and public audiences as it is developed into a national park. Excavations in monumental and household spaces have focused on reconstructing everyday life, from foodways and production, to rituals demarcating life-cycles and renewal, to large-scale events in the main plazas. Emphasizing Currusté as a place of convergence for multiple communities in the past and the present, a participatory archaeology program develops collaborative, inclusive models for knowledge construction and public interpretation that incorporate perspectives of multiple constituent stakeholders.

**Malloy, Maureen (Society for American Arch) [120]** *First Chair*

**Maloof III, George O [117]** *see Salgado Gonzalez, Silvia*

**Malpiedi, Jennifer T. [142]** *see Lapham, Heather A.*

**Manahan, T. (Kent State University) and Traci Ardren (University of Miami)**

[19] *Regional Centers and the Dynamics of State Expansion: The Perspective from Xuenkal*  
The ancient Maya center of Xuenkal, Yucatan, located halfway between Chichen Itza and its north coast port of Isla Cerritos, contains significant occupations associated with Cehpech and Sotuta spheres in discrete contexts. Since 2004, Proyecto Arqueológico Xuenkal (PAX) has investigated the nature of the relationship between Xuenkal and its neighbors to elucidate how Chichen Itza grew to dominate the Cupul region and what role local Xuenkal elites may have played. PAX research suggests that the relationship between centers was more nuanced than current models contend and that the effects were experienced asymmetrically across the sociopolitical and economic landscape.

**Manahan, T. Kam [19]** *see Ardren, Traci; [19] see Wesp, Julie K.*

**Mancini, Jason (Mashantucket Pequot Museum/UCONN) and David Naumec (Mashantucket Pequot Museum)**

[116] *"we Judge it therefore very Necessary to make Some alterations amongst ourselves": Indian Social Organization in 17th and 18th Century New England*

Land has always been at the center of the complex relationship that emerged between Indians and English colonists in the seventeenth century. In many of the "transactions" that took place, aspects of Indian social and political organization are identified that evidence stratification. In the eighteenth century, however, a dramatic transformation took place - the transfer of nearly all Indian land to the English. What then happened to Indian social and political organization when

land was taken out of the equation? This paper will examine the important transformations that took place during the 17th and 18th centuries as Indians responded to this challenge.

**Mandarino, Marcelle (MANDARINO, M.C.), Débora Barbosa (Museu Nacional/UFRJ), Maria Dulce Gaspar (Museu Nacional/UFRJ), Sílvia Peixoto (Museu Nacional/UFRJ) and Suzana Bulcão (Museu Nacional/UFRJ)**

[139] *Projeto de Diagnóstico e Preservação do Patrimônio Arqueológico do COMPERJ: o sítio arqueológico Macacu IV*

Integrante do Projeto de Diagnóstico e Preservação do Patrimônio Arqueológico do COMPERJ (Complexo Petroquímico do Rio de Janeiro), o sítio Macacu IV compõe o quadro ocupacional do estado do Rio de Janeiro, cujo início data de finais do século XVI. O objetivo maior desse projeto é caracterizar os sítios arqueológicos identificados na área de implantação do Complexo, contribuindo, dessa maneira, para o entendimento das formações históricas e arqueológicas da região. Assim, este trabalho tem como objetivo apresentar as pesquisas desenvolvidas em Macacu IV, um sítio que tem se mostrado bastante relevante no âmbito desse Projeto.

**Mannino, Marcello (Max Planck Institute EVA), Emiliano Tufano (Universita' degli Studi Suor Orsola Benincasa, Naples (Italy)), Kenneth D. Thomas (Institute of Archaeology, University College London (United Kingdom)), Michael P. Richards (Max Planck Institute for Evolutionary Anthropology, Leipzig (Germany); University of Durham (United Kingdom)) and Sebastiano Tusa (Soprintendenza del Mare, Regione Siciliana (Italy); Universita' degli Studi Suor Orsola Benincasa, Naples (Italy))**

[85] *Becoming insular? Human responses to climate change and rising sea levels along the coasts of western Sicily from the Late Pleistocene to the Mid-Holocene*

From the end of the last glacial epoch, climatic warming and associated rises in sea levels affected the anthropic occupation of coastal environments. The impact of such environmental changes on human settlement and subsistence was probably most extreme in coastal areas that became isolated as a result of post-glacial sea level rise. One such region is western Sicily, where two of the present-day Egadi Islands (i.e. Levanzo and Favignana) only became islands in the early Holocene. Isotopic data from faunal and human remains, presented in this paper, provide evidence on human adaptations to developing insularity in this Mediterranean coastal environment.

**Manzaneda Atea, Israel [119] see Davis, Katharine M.**

**Mapunda, Bertram [145] see Foutch, Amy**

**Marchegay, Sophie**

[111] *Las figurillas del Formativo tardío en la costa septentrional de la Huasteca: diversidad y singularidad de estilos.*

Las figurillas del Formativo en Mesoamérica han llamado la atención de estudiosos desde hace años, sin embargo los trabajos sobre las figurillas preclásicas procedentes de la Huasteca son escasos. Recientes hallazgos en la costa tamaulipeca muestran una gran diversidad de tipos en un mismo sitio para los periodos Tantuán I, II y III, que completan de manera significativa la tipología existente. La diversidad y la singularidad de estas piezas muestran la complejidad del acercamiento que podemos tener a este tipo de material, el cual constituye casi el único artefacto que representa la forma humana en la región y este periodo.

**Marcone, Giancarlo (University of Pittsburgh)**

[45] *In between Wari and Lima: "Lote B" a village settlement in the Lurín valley*

Interregional interactions hardly happen between homogenous groups. Both the expansive state and the local society are the result of complex tensions within each society. New research shows that the effects of Wari or Tiwanaku were likely present at the top socio-political settlements and limited at the villages. The Analysis of the archaeological site "Lote B" a village settlement in the Lurín Valley shows a limited impact of Wari, and important transformations related to the expansion of Lima culture traits. In this way "Lote B" becomes informative in two levels of "local responses": (a) local responses to the Lima expansion. And (b) regional responses of Lima and peripheries to Wari.

**Marcoux, Jon (coux5821)**

[14] *Changes in Domestic Space and Time among Late Seventeenth-Century Cherokee Households*

The early English Contact period (ca. A.D. 1670-1715) was an extremely turbulent time for

southeastern Indian groups, being marked by disease, warfare, and massive population displacements. In this paper, I examine how this chaotic period played out in the daily lives of Cherokee households through a diachronic comparison of architecture and community organization. I find that the rapidly changing conditions of the period simply did not allow for the creation of strong sedimented community and household identities rooted in the *longue durée* of daily repetition, history, and memory – hallmarks of earlier Mississippian communities. Quite the opposite, this environment favored strategies that were the very antitheses of those that constituted Mississippian identity – short-term strategies that emphasized flexibility and improvisation.

**Marcus, Joyce [169]** *Discussant*

**Marden, Kerriann (Tulane University)**

[66] *Interpretation of the variation in mortuary behavior in Chaco Canyon*

The condition of prehispanic human remains found in Chaco Canyon is complex and has had many interpretations. Studying postmortem changes to these remains reveals information about bone preservation, spatial orientation, and type, degree, and distribution of taphonomic features, suggesting a need for a broader range of interpretation of the effects of human action. This paper presents results from on-going taphonomic research of the Chaco Canyon human skeletal series. The current findings augment our understanding of the range of the treatment of the dead in Chaco Canyon and point to new interpretations for the cultural meaning of Chacoan burial practices.

**Marek-Martinez, Ora (University of California, Berkeley)**

[157] *Tribal Historic Preservation Offices as a Microcosm of Archaeology in Indian Country*

This paper attempts to discuss current issues and concerns of Tribal Historic Preservation Offices (THPO) in their archaeological and cultural resource management (CRM) activities. The issues facing THPO's can be analytically viewed as a microcosm of Indian Country archaeological and CRM efforts, thus creating a window to a field that many times, is not fully visible. The endeavors within the field of Indigenous archaeology are hardly seen or discussed in the larger mainstream archaeological community, however, some of the developments within the field have several implications for practicing archaeologists that merit collaboration and communication between them and tribes.

**Margaris, Amy (Oberlin College)**

[30] *Design Insights from Studies of Bone Mechanics*

Studies of the organization of forager technologies typically center on stone, which is hard, brittle, and durable. This focus excludes bone and antler, which are fibrous composites whose properties are ideally suited to the creation of certain kinds of tools and tool components. Examining a range of osseous media from a materials science perspective sheds light on the inherent properties of the materials, and on the functioning of complex tools that are incompletely preserved. Mechanical testing procedures conducted with antler, cervid, and pinniped bone will be discussed along with applications to protohistoric technologies from the Subarctic.

**Margomenou, Despina (Georgia State University) and Maria Roumpou (University of Bradford)**

[74] *An interdisciplinary approach to the study of storage practices: the Northern Greek Storage Project*

The paper presents the insights gained from a comparative study of storage practices in northern Greece using evidence from a number of sites covering the period from the Early Bronze Age to the end of the Iron Age (ca. 3300/3200-480BC). Storage areas and vessels were excavated, recorded and mapped and storage vessels were systematically analyzed for organic residues. The paper demonstrates the potentials of such interdisciplinary approaches to the study of storage practices and proposes new ways to integrate evidence from organic residue analysis and archaeological research, while addressing more general questions regarding the emergence of complexity in the region.

[74] *First Chair*

**Marotta, Melissa [28]** *see Reinhard, Karl*

**Marquardt, William (Florida Museum of Natural History)**

[128] *Shell Mounds In Context*

Mollusk shells accumulated by humans are found on coasts, rivers, and lakes throughout the

world, and have been studied for decades from many different perspectives. These accumulations vary from one another in shape, thickness, shell species, and relative shell content. Their contents, shapes, and functions can vary through time. They have been interpreted as garbage dumps, temple mounds, ceremonial mounds, and feasting loci, or some combination of these. I critically review a number of interpretations of shell mounds and argue for firmer empirical substantiation of behavioral interpretations and for more attention to environmental contexts of mound formation and deformation.

**Marshall, Maureen (University of Chicago)**

[50] *Bodies, Burials, and Boundaries: Variability in Late Bronze Age (1500-1200B.C.) Mortuary Practice in the South Caucasus*

The cemetery is an important axis point in the interpretation of socio-political complexity and organization of mortuary data within and between sites. As a formal and ordered space, the cemetery is often portrayed as representative of centralized organization, and the result of communities claiming resources and territory and identifying themselves in contrast to other groups. However, variability within cemeteries is seen as a means of social distinction and differentiation. Mortuary practices in the South Caucasus Late Bronze Age (1500-1200 B.C.)—a period of socio-political reorganization—challenge many of our assumptions about the organization of burials and that of living society.

**Marshall, Michael Steven [150]** see *Baxter, Jane Eva*

**Martin, Alexander (University of Pittsburgh)**

[45] *Local Economic Reactions to Middle Horizon Integration and their Implication to Sociopolitical Complexity: Evidence from the Coast of Ecuador*

It is argued that control of prestige items bestowed elites with prestige that helped them consolidate power and fomented social complexity. The unprecedented rise of large states and expansive trade networks during the MH offer us the opportunity to test these assumptions. Data from the Spondylus manufacturing industry of coastal Ecuador suggest that the industry mainly affected sociopolitical development by providing an added source of income directly to the domestic unit. Influxes of surplus to the nuclear household can create the centripetal forces that cause population nucleation, which makes specialization and political development comparatively cheaper than in less nucleated communities.

**Martin, Alexander J. [65]** see *Murillo Herrera, Mauricio*

**Martinez, Desiree (Harvard University) [105]** *Discussant [105]* *Second Chair*

**Martinez, Maria (Univ. of Texas at Austin)**

[64] *The Development and Function of Elite Space at La Milpa, Belize*

In 2007 and 2008, the Programme for Belize Archaeological Project undertook excavations at the medium-sized Lowland Maya urban center of La Milpa. Excavations at courtyard 88, an elevated courtyard group adjacent to the Great Plaza, have revealed significant information about the development and function of elite space. The location of the group, a primary chultun burial, and the continuous and expansive occupation (300 B.C. - A.D. 850), suggest that this location was transformed into a sacred space by pioneering elite populations as early as the Late Preclassic period. This paper presents preliminary findings and interpretations for excavations at courtyard 88.

**Martinez, Natalia (University of Arizona)**

[10] *Homogeneity and Continuity along the Northwest/Southwest Borderlands: Macrobotanical Assemblages from the Early Agricultural Period.*

A compilation of 25 macrobotanical assemblages dating to the Early Agricultural period of the Southwest/Northwest borderlands is presented. This period is characterized by patterns and variability in subsistence strategies during the transition to maize agriculture and the development of low-level food production. Regional and temporal comparisons were possible due to data obtained from disparate ecological zones and spanning the entire period. Results indicate low mobility patterns evidenced by a resource procurement radius of less than 15 km. Ubiquities indicate similar resource exploitation regardless of a site's associated ecological zone or temporal placement.

**Martinez, Gustavo [130]** see *Luchsinger, Heidi M.*



**Martinez Ordonez, Eva [117]** *Discussant [117] Third Organizer*

**Martinez Yrizar, Diana [166]** *see McClung de Tapia, Emily S.*

**Marzahn-Ramos, Betsy (Brandeis University)**

[54] *Using Semiotics to Understand the Materialization of Political Identity*

This paper addresses the utility of Peircian semiotics for highlighting subtle expressions of political identity materialized in daily practice and available to the archaeologist through analyses of ceramics, architecture, and burial practices. Such an approach facilitates the recognition of traditionally underrepresented actors, such as non-elites, and activities, including construction choices, in the formation and expression of community identity. Examples from the Late and Terminal Classic Maya of the Middle Usumacinta River Basin will illustrate the application of these theoretical concepts to archaeological investigation and analysis.

[54] *First Chair*

**Masson, Marilyn [100]** *see Bair, Daniel*

**Masucci, Maria (Drew University)**

[110] *Fabric and Culture: Technological Change in Ecuadorean "Finger-Painted" Pottery*

Finger-applied black paint decoration is the primary decorative marker for the Guangala Phase, Regional Developmental Period of coastal Ecuador (ca. 300 BC – AD 600). Vessels bearing this decoration are viewed as insignificant beyond cultural period identification. Petrographic analysis yields evidence of chronologically significant changes in fabrics which correlate with changes in surface treatment, form, vessel size and burn patterns. These in turn may be related to observed shifts in faunal assemblages and settlement patterns. The information on technology revealed through petrographic analysis of these consistently ignored "domestic" wares suggests a relationship between technological change, diet, cooking methods and socio-economic factors.

[110] *First Chair*

**Mathers, Clay (The Coronado Institute), Charles Haecker (National Park Service, Heritage Partnerships Program) and Christopher Adams (USDA Forest Service, Gila National Forest)**

[171] *Metaphors of Violence, Theaters of Conflict: Exploring Strategic and Theatrical Uses of Military Power in the 16th Century Southwest*

Violence and conflict were salient characteristics of the relations between Native American communities and Spanish entradas in the American Southwest throughout the 16th century. From their early encounter at the Battle of Hawikku in July 1540, to their attack on Acoma in January 1599, Spanish expeditionaries and their allies regularly met with armed and other forms of native resistance. Recent archaeological discoveries in New Mexico highlight the sustained nature of this armed conflict and serve as the point of departure for exploring larger questions about the uses of violence/military power by Native Americans, Spaniards and their native allies.

[171] *First Chair*

**Mathews, Jennifer (Trinity University)**

[48] *Commoner Recycling or Ritual Practice? Mesoamerican Commoners Appropriating Elite Traditions*

Mesoamerican elites changed site layouts over time, essentially cutting off commoners from ceremonial precincts. This segregation may have led to disengagement in state rulership, resulting in passive resistance to authority. This condemnation of leadership is evidenced by non-elites appropriating sacred spaces and reuse of abandoned elite objects. At the elite level, destruction and recycling is explained as "ritual," while at the commoner level it is argued to serve "practical" purposes. This paper argues that scholars need to reassess their interpretations of non-elite reuse of elite materials as simply serving functional purposes and reconsider it as its own form of ritual.

**Mathien, Joan Frances [66]** *see Hull, Sharon K.*

**Mathiowetz, Michael (U.C. Riverside)**

[132] *"The Son of God who is in the Sun": Political Authority and the Personified Sun God in Ancient West and Northwest Mexico*

An important topic in West and Northwest Mexican archaeology concerns the role of Mesoamerican people in the florescence of the site of Paquimé (Casas Grandes), Chihuahua (A.D. 1200-1450). Political, economic, and ideological components of Aztatlán-tradition societies likely impacted the sociopolitical reorganization across Northwest Mexico and the American

Southwest after A.D. 1200. This presentation examines the archaeology, ethnohistory, and ethnography of these regions and explores shared strategies by which ritual leaders legitimized their social position by associating themselves with the Sun. This study offers support to arguments that the arrival of high-status individuals from West Mexico precipitated the development of Paquimé.

**Matney, Timothy (University of Akron)**

[11] *Understanding Early Bronze Age Social Structure Through Mortuary Remains: A Pilot aDNA Study from Titris Hoyuk, Southeastern Turkey*

The discovery in the 1990s of an unusual public mortuary display at the Early Bronze Age urban center of Titris Hoyuk raises questions about the social structure of this community. This paper presents a pilot study of aDNA extracted from human remains from this mortuary display and from other typical EBA burials at Titris Hoyuk. One interpretation of the public display is that the individuals buried there were outsiders to the community, perhaps casualties of warfare. Studying the genetic relatedness of individuals buried across Titris Hoyuk allows preliminary assessment of this interpretation and provides further insight into Mesopotamian social structure.

**Matson, RG [164]** see *Kemp, Brian M.*

**Matsui, Akira (Nara Nat. Inst. for Cult.)**

[165] *Year-round activities of the large wet shell mounds during the Jomon Period, JAPAN*

Over 3000 shellmounds are distributed in Japan. They are generally divided into middens consisting of patches of shell accumulation and the large U-shaped mounds on the coastal terrace. The Awazu (Shiga, 4570-4760yrBP) and Higashimyo (Saga, 7400-7200yrBP) excavations are discussed. Awazu is located on the bottom of Lake Biwa and consists of shellfish and nutshell layers superimposed successively. Higashimyo consists of dry shell mounds and acorn storage pits distributed on a lower wet area. They both contain poor artifacts and bones indicating that two principal activities, shellfishing and nut processing, were integrated there, and probably were communal and occurred year-round.

**Matsumoto, Go (Southern Illinois Univ.)**

[170] *Sicán Ancestor Cult: Approach and Evidence*

The protracted interactions between the living and the dead, a major theme of the Andean mortuary archaeology since the last decade, have been discussed primarily through the analysis of the deceased body and the depositional site. In this article, with reference to our excavations at the site of Sicán in the past three years, I argue for the necessity of: (1) sampling of vertically and horizontally larger areas; (2) well-balanced adhibition of macro and microcontexts; and (3) data interpretation based on the holistic understandings of the characteristics of the area and the time period in question.

**Matsunaga, John (UC Berkeley)**

[130] *Chemical Compositional Analysis of Vinca Culture Figurines: A Study Using a Portable ED-XRF Spectrometer*

In recent years, the use of portable ED-XRF spectrometers has grown within the field of archaeology. The portable and non-destructive aspects of this technology have allowed archaeologists to collect important chemical compositional data from archaeological materials in situations where it was not possible to collect such data before. This poster will present the results of a chemical compositional analysis that was conducted on clay figurines from the Neolithic tell site of Vinca-Belo Brdo using a portable ED-XRF spectrometer. The goal of this study is to obtain a better understanding of figurine technology and production within the Vinca Culture.

**Matternes, Hugh (New South Associates), and Valerie Davis (New South Associates)**

[90] *Human Mortuary Deposits and the Comprehensive Everglades Restoration Plan (CERP)*

Mortuary sites and human remains must be addressed as part of the restoration project. Native American and CERP management agencies recognize human remains as "Trust Responsibilities" and distinct from other cultural resources. This interpretation places the management of human remains outside the range of standard Section 106 procedures. The proportion of sites with human remains is slightly higher in the CERP area than in the rest of Florida. They therefore represent significant management challenges. The distribution of human remains on Native American sites vary by cultural period requiring management strategies to shift and adjust on a site by site basis.

**Matternes, Hugh [172]** *see De La Rosa, Carla E.*

**Matthew, Laura [2]** *see Card, Jeb J.*

**Mattox, Wes [12]** *see Augustine, Jonah*

**Mattson, Hannah (University of New Mexico)**

[87] *Large-Scale Variation in Turquoise and Shell Ornamentation in the Late Prehistoric Southwest*

Anthropological research has shown that personal adornment is often highly associated with various aspects of social identity. This paper explores broad variation in worn ornamentation in the late prehistoric Southwest, and discusses these patterns in terms of identity and interaction on a macro-regional scale. This discussion focuses on turquoise and shell, and compares the spatial distributions, forms, and contexts of use of jewelry made from these two major material types.

**Mauldin, Raymond (UT San Antonio), Cynthia Munoz (UTSA- Center for Archaeological Research), Jennifer Thompson (UTSA- Center for Archaeological Research) and Leonard Kemp (UTSA- Center for Archaeological Research)**

[53] *Hunter-Gatherer Resource Intensification and Changing Patterns of Fire-Cracked Rock Features in Central and South-Central Texas*

Using Binford's (2001) recent work, researchers (see Freeman 2007; Johnson and Hard 2008; Thoms 2008) suggest that Central and South-Central Texas hunter-gatherers should intensify on plants throughout the Archaic and Late Prehistoric periods as population growth increasingly restricts subsistence options. We explore these suggested patterns of intensification by focusing on temporal changes in the density of rock features used primarily to process low return plant resources. Data from several hundred features on over 80 components demonstrate that with some exceptions, the patterns are consistent with the suggested increasing intensification on plants, especially late in the sequence.

**Mauricio, Ana (PUCP)**

[15] *Portachuelo de Charcape. Rethinking the Mochica warfare in the lower Jequetepeque Valley*

The presence of defensive sites in the lower Jequetepeque Valley during the late Moche period has been interpreted as evidence of endemic and prolonged conflict between local communities. In this hostile environment, Portachuelo de Charcape stands as an exception, without evidence of defensive features. Based on the archaeological evidence recorded in Charcape and in other contemporary sites such as San José de Moro, Cerro Chépén and San Ildefonso I will discuss the role of social integration vis a vis conflict and, I will address the nature of warfare in this region in contrast to other models of Moche coercive action.

**Maxham, Mintcy and John F. Scarry (Research Laboratories of Archaeology, UNC-CH)**

[42] *Late Prehistoric Community Ritual in the Rural Black Warrior River Valley*

Investigations at several Late Woodland and Mississippian sites in the Black Warrior Valley indicate the widespread use of elaborately decorated fineware ceramics, traditionally linked to the socio-political elite. At these rural sites, the ceramics are found with subsistence remains and in contexts suggestive of feasting. Evidence from 1TU66 also suggests that these practices may predate the rise of the Moundville polity. We suggest that this pattern reflects long-standing, community-based ritual practice associated with towns, similar to the town of the historic descendants of the Mississippian peoples of the Lower Southeast.

**Maxham, Mintcy [42]** *see Hammerstedt, Scott W.*

**Maxwell, Judith M. [115]** *see Scott, Ann M.*

**May, David W. [190]** *see Hill, Matthew G.*

**May, J. (Schiele Museum of Natural History) and Kenneth Robinson (Wake Forest University)**

[174] *Industrial Archaeology of North Carolina: A Survey of Activities*

Within North Carolina, most Industrial Archaeology (IA) studies are accomplished as Cultural Resource Management (CRM) projects. Examples include saw and gristmills, iron furnaces, blacksmith shops, textile mills, gold/coal mines, lumber/naval stores camps/operations, and roads and bridges. These studies provide unique archaeological insights into historic technology and its

related machinery, cultural context of the workers, managers, and owners, settlement and land use patterns, local and regional economic markets, and environmental impacts. This poster examines a sample of studies for trends and themes as well as suggestions for future (IA) studies.

**May, Jared (University of Landau), John Sullivan (Bureau of Land Management), Markus Dotterweich (University of Landau) and Rachel Stout-Evans (USDA-NRCS: Metcalfe Soil Survey)**

[98] *Holocene Landuse Changes and their effects on the Environment, a geomorphological approach using Soil Archives*

During the last 3 years we have studied the Erosion and Sedimentation Cycles in Northern Mississippi. Using Soil Archives we have identified Geomorphic changes in the Landscape due to Anthropomorphic Landuse. Distinctive environmental impacts may be identified from each of the following phases: Archaic, Woodland, and Mississippian Period Culture as well as European Farmstead Settlement, Mechanized Agriculture and Forestry, and Erosion Control Implementation. In this paper we will present our latest findings from Winterville Mounds and Owl Creek Indian Mounds and offer some challenging new interpretations concerning Native American and European Landuse in the Loess Uplands of Northern Mississippi.

**May Ciau, Rossana B. [154]** see *Gallareta Cervera, Tomas*

**Mayo, Carlos [65]** see *Mayo, Julia C.*

**Mayo, Julia (Postdoc scientists STRI) and CARLOS MAYO**

[65] *Proyecto Arqueológico El Caño. Avance De Los Resultados De La Campaña De Excavación 2008*

A orillas de Río Grande de Coclé, Panamá, se encuentran dos de los yacimientos arqueológicos más extensos de la región, Sitio Conte y El Caño los cuales presentan elementos característicos de sociedades jerarquizadas -estructuras semimonumentales y entierros de pompa- entre otros. En 2008 realizamos excavaciones en el Caño. Se encontraron 71 unidades estratigráficas, tres estructuras de combustión, dos paquetes de huesos humanos quemados y 97.738 fragmentos de artefactos. El análisis de carbono 14 realizado sobre una muestra de carbón de una de las estructuras de combustión arrojó una fecha Cal AD640 a 720 y Cal AD 740 a 770.

**McAnany, Patricia [158]** *Discussant*

**McAndrews, Timothy [45]** see *Capriles, Jose M.*; [45] see *Thomas, Colin T.*

**McArdle, Germaine (Indiana University of PA), Germaine F. McArdle (Indiana University of Pennsylvania), Justin A. DeMaio (Indiana University of Pennsylvania) and Tiara M. Bey (Indiana University of Pennsylvania)**

[33] *Applications of Advanced Technology to an Archaeological Survey of Hermosa, New Mexico*  
Hermosa, NM, settled in the 1880s and abandoned after 1910, was one of the occupations investigated during a two-week survey of a 9,000 acre section of the Gila National Forest Black Range District. IUP students used advanced technologies to record artifact and site locations and measure occupation intensity. The Trimble R8 and GeoHX GPS systems were used to map surface artifact concentrations and structure locations to sub-centimeter levels of accuracy. The magnetic susceptibility survey and a metal detector survey were used for the identification and interpretation of occupation loci. This poster presents the results of the survey.

**McArdle, Germaine F. [33]** see *McArdle, Germaine F.*

**McBride, Kevin [173]** see *Kasper, Kimberly*

**McCafferty, Geoffrey (University of Calgary), Rhianne McKay (Trent University) and Tanya Chiykowski (University of Calgary)**

[65] *Practice and Habitus in Postclassic Communities of Pacific Nicaragua*

Recent community-focused investigations along the western shore of Lake Nicaragua have revealed interesting patterns between residential mounds and between the sites of Santa Isabel (Rivas) and Tepetate (Granada). This presentation will document variations in such artifact classes as ceramics, lithics, ornamentation, and production specialization in order to discuss inter-community practices, while contrasting the larger habitus of the two sites. Such an analysis considers material culture on different interpretive scales, with particular attention to social

identities performed during a period of dramatic culture change with Mesoamerican influences into lower Central America.

[101] *Second Organizer* [101] *First Chair*

**McCafferty, Geoffrey** [101] *see* *Watson, Brett*

**McCafferty, Sharisse** [101] *see* *Wilke, Sacha J.*

**McCall, Grant (Tulane University) and Jonathan Thomas (University of Iowa)**

[184] *New Middle Stone Age Discoveries from the Central Namib Gravel Plains, Western Namibia*

This paper describes the findings of two seasons of survey and test excavations of Middle Stone Age localities on the central Namib gravel plains south of the Swakop drainage in the Namib-Naukluft National Park, Western Namibia. Important findings include (1) stone tool assemblages dominated by the Levallois technique and centripetal core reduction, with a substantial blade-like component and (2) an apparently worked hematite bead recovered from test excavation. The paper presents the results of attempts to date these archaeological remains, the geological contexts in which they were found, and plans for future fieldwork in the region.

**McCall, Grant** [77] *see* *Johnson, Scott*; [70] *see* *Thomas, Jonathan T.*

**McCarthy, John (S&ME, Inc.)**

[8] *Class Struggle in the Dining Room: Ceramic Consumption of an Élite Planter Household at the Margins of Respectability*

This paper presents an analysis of the ceramic assemblage recovered at a ca. 1760 – 90 planter house site in the South Carolina Lowcountry. The site is believed to be associated with a minor branch of an elite planter family. The consumption and investment choices of this household are considered in the contexts of their apparent social and economic status at the margins of their social class, where social status would have been most keenly felt as the family struggled to maintain their respectability and membership in the colonial elite.

**McCarty, Sue**

[95] *Telling the Future or Hording the Past?: A Halaf Cattle Astragalus Cache from Kazane Höyük, Southeastern Turkey*

Kazane Höyük, outside modern <sup>a</sup>niurfa, southeastern Turkey, is one of the largest known sites belonging to the Halaf cultural horizon (5900-5350 cal. B.C.E.). The largest structure found during the 2004 excavations in Kazane's outer town contained a cache of over 56 cattle astragali (ankle bones). Comparanda from contexts elsewhere suggest that astragalus collections carried cultural significance beyond meat-processing refuse. This multivalent cache's relationship to a) incipient craft specialization, including pastoralism and hide production b) counting devices and c) feasting, augury and gaming will be discussed to provide insight into the poorly understood political economy of this late Neolithic pre-state society.

**McClelland, John** [43] *see* *Lincoln-Babb, Lorrie*

**McClung de Tapia, Emily (UNAM MEXICO), Cristina Adriano-Morán (Posgrado en Ciencias Biológicas, UNAM) and Diana Martínez Yrizar (IIA-UNAM)**

[166] *Beyond Maize: Macrobotanical Evidence for Subsistence at Postclassic Xaltocan*

Macrobotanical remains are particularly well preserved in Postclassic deposits at Xaltocan in the northern Basin of Mexico. Although maize occurs in the majority of the flotation samples and is clearly the most abundant plant material, other significant genera have been recovered from diverse excavations. Here we will evaluate the importance of other wild and cultivated plants: beans, chile, chia (*Salvia* spp.), huauhtzontli, amaranth, cacti, mezquite, and tejocote, among others. The exceptional preservation of macrobotanical remains at Xaltocan allows us to explore the role of subsistence components at different organizational levels: household, local, and regional economy during the Postclassic.

**McClung de Tapia, Emily** [20] *see* *Borejsza, Aleksander*

**McClure, Sarah (University of Oregon), Brendan Culleton (University of Oregon), Consuelo Roca de Togores (Museo Arqueológico de Alicante (MARQ)) and Oreto García (Universitat de Valencia)**

[130] *Chalcolithic Burials: New chronological and paleodietary evidence from Cova de la Pastora, Alicante, Spain*

New AMS radiocarbon dates and stable isotope analyses of human remains clarify interpretations of Cova de la Pastora, a Chalcolithic (ca. 3000 BC) collective inhumation site in Alicante, Spain.

Originally excavated in the 1940s, the cave contained the remains of up to 70 individuals with a wide array of grave goods. As part of an interdisciplinary project, the revision of museum assemblages and new excavation indicate significant Bronze Age and Iberian Iron Age components, and Bronze Age burials are known from other caves in the region. These new data provide the first absolute chronological and dietary information from the site.

**McConaughy, Mark (PA Historical and Museum Commission)**

[106] *ENSO We Come to an End or How I Learned to Love Coastlines*

James B. Richardson, III's, interests in the transition from Late Pleistocene to Holocene climates and cultural developments greatly influenced his students. He showed how development of the ENSO phenomenon played a role in coastal emergence along the Peruvian coast during the early Holocene, and its affect on cultural developments in South America. Richardson instilled in his students an ecological approach to the study of human development, regardless of where they ended up working in the world. This paper examines Richardson's influence on the author's work and more generally on the archaeology of the Americas.

**McCormick, Megan (Hunter College, CUNY)**

[136] *Pots and Politics in Prehistoric Rajasthan and Beyond: The Socio-Economic Context of Ahar-Banas Pottery Production As Seen From Gilund*

Localized pottery production in southeastern Rajasthan dates from 3000 to 1700 BCE and correlates with the earliest phases of the Ahar-Banas Cultural Complex, which incorporated over 100 sites, including Gilund, a large agro-pastoral settlement. Material culture comparisons from contemporary sites in Northwestern India, Sindh, Iran, and Bactriana situate Gilund as an important node in a trans-regional interaction sphere involving many polities and economic systems. This paper presents a detailed analysis of the Gilund pottery. Its ultimate goal is to delineate levels of Ahar-Banas integration into this interaction sphere by comparing contexts of intra- and inter-site pottery production, use, and distribution.

**McCoy, Elizabeth (Univ of South Florida), Lori D. Collins (University of South Florida, Alliance for Integrated Spatial Technologies) and Travis F. Doering (University of South Florida, Alliance for Integrated Spatial Technologies)**

[163] *Sugar Mills and Slavery: Preliminary Investigation at the Bulow Sugar Mill*

With the first commercial production of sugar beginning in 1767, Florida entered the sugar trade, and thus a larger narrative that encompasses, as examples, domestic and international trade routes, slave and contract labor, and architectural and technological diffusion. New investigations at the Bulow sugar mill in Bunnell, Florida represent a unique opportunity to reexamine the role of the Florida mills in the larger sugar industry. This paper will serve as an initial examination of the labor forces, both ante-bellum and post-war, employed at the Florida sugar mills, with preliminary documentation of the Bulow mill serving as a case study.

**McCulloch, Tom (Advisory Council on Historic Preservation) [160] *Discussant***

**McCullough, David (US Army Corps of Engineer)**

[172] *The US Government's Role in the Investigation and Preservation of Site PO 29: Compliance, Coordination and Communication*

The US Army Corps of Engineers, Jacksonville District, has conducted cultural resources investigations in support of the Portugues and Bucana flood risk management project since the late 1970's. The Portugues Dam is the final component of the project. Data recovery was recently completed at site PO 29, an historic property within the pool of the dam. The Corps completed a complex set of coordination exercises to fulfill its compliance with Federal historic preservation laws. The Corps' partner in dam construction, the Puerto Rico Department of Environmental and Natural Resources, was also required to comply with Commonwealth law, and the Corps provided coordination and communication support to fulfill this requirement.

**McCullough, Robert (Indiana University-Purdue University Fort Wayne)**

[17] *Central Indiana as a Late Prehistoric Frontier: Western Basin, Fort Ancient, and Oneota*

Beginning in the 1990s, a research emphasis of the Glenn Black Laboratory of Archaeology on the Late Prehistoric in Indiana, especially the Oliver phase, has resulted not only in an increased understanding of that phase but a recognition of at least three groups interacting in central Indiana at the peripheries of their homelands. First to arrive were Castor peoples, a Western Basin-derived population originating in the Maumee valley; by the early thirteenth century, Fort Ancient peoples were in the area, and their interactions led to the Oliver phase. Later, Oneota groups briefly coexisted with, and then displaced, these earlier groups.

**McDaid, Christopher [88]** *see Wood, Amy B.*

**McDavid, Carol (University of Houston) [57]** *Discussant [137]* *Discussant*

**McDonald, Josephine (Australian National University) and Peter Veth (Australian National University)**

[84] *Tracking the Tjurrkupa: Rock Art and Dreaming stories on the Canning Stock Route, Western Desert*

Western Desert petroglyphs and pictographs demonstrate distinct style graphics across the sandy deserts of Australia. Western Desert social dynamics produce both unique style provinces as well as shared graphic vocabularies, particularly in the recent past. Western Desert groups who speak for the art, contextualize this in their Tjurrkupa (Dreaming stories). Mythological narratives incorporating pigment and engraved art provide insights into how the rock art is used both in interpreting Dreaming stories and tracking these across the landscape. Rock art has been used by the people of the Western Desert to define their cultural identity, their social connections and their Tjurrkupa.

**McDonald, Mary (Archaeology, U of Calgary)**

[16] *The earliest Saharan mobile pastoralists: already socially complex?*

Social complexity is posited to have emerged among the pastoral societies in the Central Sahara and Sahel by 4000 BC. 'Mobile elites' within cattle-keeping groups developed prestige-goods economies leading to wealth accumulation. Settlement data and archaeological assemblages now suggest that such elites emerged in the Eastern Sahara as early as 5400 BC. In Dakhleh Oasis Egypt, sites of pastoral nomads feature special structures and many of the 'valued objects' associated with the later mobile elites, such as small axes and stone beads. These mid-Holocene mobile elites may have played a role in the emergence of complex society in Egypt.

**McElroy, Stephen (Statistical Research, Inc), Malcolm Hooe (Statistical Research, Inc.) and Matthew Lewis (Statistical Research, Inc.)**

[43] *Application of 3D Laser Scanning to Cemetery Excavation*

The ability to document fragile osteological remains is an important concern during the excavation of cemeteries. 3D laser scanning technology permits recording of human remains in-situ in the field and additional attributes, such as bone pathologies, in the lab. This paper outlines field and lab methods used on the JCC project for recording and measuring human remains using non-contact laser scanning. Our approach allows multiple analysts in different locations to measure human remains using a virtual 3D analytical model without directly handling remains. In addition, 3D digital modeling allows osteological research to continue after the human remains are reinterred.

**McFarlane, William (JCCC - Anthropology) and Miranda Stockett**

[114] *Comparing Communities in west-central Honduras*

Drawing on recent research in three regions of west-central Honduras, we explore the continuities and disjunctions of community life during the Late Classic and Early Postclassic periods. An exploration of variation in household form and function, relations between household and center, the impact of wider-reaching interactions and influences, and the importance of change over time is emphasized. In particular, we highlight work from a newly initiated archaeological project in the Jesús de Otoro valley and discuss its place in the larger world of southeastern Mesoamerica. Models of community organization based on possible differences in social or ethnic identity are considered.

**McGuire, Randall (Binghamton University)**

[131] *Using the Craft of Archaeology to Build (co-) Futures*

The key to creating "co-futures" in archaeology lies in our craft. We can use the craft of archaeology to create knowledge, to construct meaningful histories for communities, to collaborate with communities and to challenge oppression in the modern world. Archaeologists should become more collaborative in their craft but we should not give up our expertise as good crafts persons. Speaking truth to power requires that we maintain the authority of our craft. For effective collaboration, however, we need to enter into a dialogue with the communities that we work with and to surrender significant authority over our research agenda.

[22] *Discussant*

**McIlraith, Erin (WSU)**

[174] *There's No Place Like Home: Using Historic Documents and Fur Trade Artifacts to Identify and Date Village Sites in Eastern Wisconsin*

Determining the locations of village sites can be difficult, particularly in the absence of intensive excavations. Drawing upon a variety of evidence, including surface collections of fur trade goods, local ceramics, historical documentation and existing archaeological data, the Fahrney Point site in Wisconsin was determined to correspond to the historically-documented East Meskwaki Village site, which was occupied between 1728 and 1730. The methodology used to make this determination is a useful tool for identifying sites and can be utilized to further refine village occupational histories of this region.

**McKay, Rhianne [65]** *see McCafferty, Geoffrey*

**McKee, Arlo [53]** *see Vawser, Anne Wolley*

**McKee, Brian (William Self Associates)**

[29] *Obsidian Sourcing, Mobility, and Exchange in Western Utah*

Mobility and exchange patterns of Great Basin peoples varied in time and space; obsidian artifact distribution provides relevant information to study those patterns. During the UNEV pipeline project, William Self Associates and Northwest Research Obsidian Laboratory used XRF to source 982 obsidian specimens from numerous western Utah localities. Studies related to two previous nearby projects also collected and sourced hundreds of artifacts. The projects identified obsidian from eight sources. This poster examines source-to-site distance for the obsidian recovered by the three projects and explores distribution differences for debitage, informal tools, and formal tools to better understand mobility and exchange patterns.

**McKillop, Heather (Louisiana State University)**

[117] *The Ancient Maya and the Intermediate Area: A View from the Coast and Cays of Belize*

For the coastal and island Maya, the Caribbean provided ready access by canoe travel to places and resources at various distances, including the Intermediate Area. Columbus' encounter of a non-Maya trading canoe off the north coast of Honduras indicates coastal traders there as well. La Esperanza obsidian from Honduras, common to distribution networks in the Intermediate Area, is a minor source at the Maya island trading port of Wild Cane Cay in southern Belize. A Las Vegas Polychrome vessel in a burial at Wild Cane Cay was imported from Honduras. These and other connections are discussed.

**McKnight, Matthew (Maryland Historical Trust)**

[174] *Stalking Archaeological Fugitives: a 21st Century Solution to the Gray Literature Problem.*

Since passage of the National Historic Preservation Act a growing body of valuable data has been generated by state agencies, CRM professionals, and preservation officers. Unfortunately, this data is usually trapped in an archaic paper-based format, restricted geographically to a single state archive. All too often the data is brought to light only to be "reburied" in the SHPO's library where it may be largely inaccessible to researchers scattered throughout the country. This poster describes how the Maryland Historical Trust is addressing this problem through the establishment of a secure, online, searchable catalog of raw data and CRM reports.

**McLemore, Virginia [18]** *see Ferguson, Jeffrey R.*

**McLeod, Bart, Lori D Collins (University of South Florida) and Travis Doering (University of South Florida)**

[183] *3D Laser Scanning Technology as a Method for Documenting a Corpus of Ceramic Vessels from Florida*

This paper reports on the progress in the development of a 3D digital database of ceramic vessels and distinctive artifacts from eleven archaeological sites in Florida, originally investigated by WPA-era archaeologists in the late 1930s. These objects include many whole ceramic vessels and numerous European contact era artifacts that have been largely inaccessible to researchers but are now being brought together in a digital archive. The examination of size, shape, and morphological characteristics are presented as a new methodology in the metrological analysis of ceramics and other distinctive artifacts, showing comparative approaches for examining regional and temporal similarities and distinctions.



**McMahon, Catherine and John D. Hall (SRI)**

[43] *Late Archaic Subsistence Strategies and Settlement Patterns in the Tucson Basin: An Overview of the Joint Court Complex Project's Prehistoric Archaeology*  
Several habitation and processing features dating to the Cienega phase of the Late Archaic period (ca. 800 B.C. to A.D. 200) were discovered as a result of the Joint Courts Complex project. Previous research on forager-farmer subsistence and settlement strategies in the Tucson Basin during this period focused on riverine settlements and the role of agriculture in prehistoric economies. This paper compares the stone artifact and botanical evidence from the Cienega phase component of the JCC project with remains from contemporaneous components at other sites and explores the implications for Late Archaic settlement and subsistence.

**McNamee, Calla [146]** see Dawson, Peter C.

**McNeil, Cameron (Queens College)**

[48] *The Preservation and Re-Use of Organic Remains in Ancient and Modern Maya Ritual Contexts*

Evidence from both ancient and modern Maya ritual activities indicates that the value of organic offerings does not end when they dry out, lose their beauty, or cease to taste flavorful. What might be considered detritus from a Western perspective may be perceived as an oblation in secondary contexts, as is found with some plants in modern Highland Guatemala. This practice in ancient contexts is impossible to analyze, however insight can be gained into the value of ritual residues at Copan where offerings containing cacao, and other foods, once placed in ritual spaces were not discarded when new vessels were introduced.

**McPherron, Shannon [184]** see Smith, Jennifer R.

**McReynolds, Theresa (University of North Carolina at Chapel Hill)**

[14] *Domestic Activities and Household Variation at Catawba New Town, ca. 1785-1818*

Bulk material assemblages from discrete cabin loci in two hamlets at the Catawba Indian village of New Town suggest domestic activities varied between neighborhoods. In particular, households in the northern hamlet appear to have engaged in cottage pottery production, while households in the southern hamlet may have focused on agricultural activities. To refine our understanding of interhousehold variability at New Town, this paper integrates spatial analyses of artifact classes and soil chemistry to identify and characterize specific activity areas. The results shed light on everyday life at New Town and the differential use of domestic space between and within neighborhoods.

**Mead, Jim [89]** see Lohse, Jon C.

**Meadow, Richard (Harvard University)**

[39] *Circumvallations and the Indus Civilization*

This paper explores possible functions and meanings behind settlement circumvallations and the concomitant organization of space within the sphere of the Indus civilization (ca. 2600-1900 calBC). Various terms "fortification," "defense," and "perimeter" walls in the literature, these massive structures are as characteristic of Indus sites as are installations related to water. But comparisons between such features once again challenge ideas of uniformity that so often have been associated with the Indus civilization and bring into sharper focus what we really know – and do not know – about the founding, form, and function of individual Indus sites.

**Means, Bernard (VA Commonwealth Univ)**

[52] *Village Peoples: Monongahela and Fort Ancient Communities of the Middle and Upper Ohio River Valley, 11th to 17th Centuries A.D.*

The Monongahela Tradition and Fort Ancient Tradition are archaeological constructs originally developed to organize material remains— including village sites—created by inhabitants of the Upper Ohio River Valley and Middle Ohio River Valley, respectively, from the 11th to 17th centuries A.D. This presentation examines select attributes—village size and shape, settlement layout, and house construction—to ascertain whether overall variation was greater within rather than between village sites assigned to these two traditions.

**Means, Bernard [52]** see Johnson, William C.

**Means, Guy (Florida Geological Survey) and Thomas Scott (Florida Geological Survey)**[125] *Geological Aspects of the Wakulla Springs Lodge Site and Vicinity*

During the course of investigations at the Wakulla Spring Lodge site, a suite of five sediment samples were taken from the profile in test unit B. The samples were taken at regular intervals and returned to the Florida Geological Survey for sieve analysis. The analysis shows that the sediment exhibits a bi-modal distribution, as well as poor sorting, suggestive of a fluvial origin. This is difficult to explain given the karst geology of the area and elevation of the site several meters above the water table. Alternatives to this interpretation and other geologic work will be discussed.

**Meanwell, Jennifer (MIT)**[132] *Recent Investigations into Classic Period Occupation in the Middle Balsas Region*

The Middle Balsas Region, located in the west Mexican state of Guerrero, has been identified as an important interaction zone between the Aztec and Tarascan empires. Very little systematic research has focused on Preclassic and Classic Period occupations in the area. In this paper, I describe the characteristic architecture, pottery, and figurines from the region based on my recent excavations at three Classic Period Middle Balsas sites. My research suggests that the Middle Balsas was densely populated from the Late Preclassic through the Postclassic Periods, but had little contact with adjoining culture groups during the Classic Period.

**Mecartea, Shauna (Cotsen Institute of Arch) and Kathleen Micham (UCLA)**[162] *Audience, Consumers And Marketing: Reaching Out In The Web 2.0 Era*

There are many students interested in learning about and participating in field archaeology; however, it is reaching those interested students that remains challenging when promoting field schools. Since its launch in 2006, the UCLA Archaeology Field Program has experienced tremendous growth and success in part to its dynamic marketing efforts. This paper presents UCLA's recent endeavors to target and engage their market audience through e-marketing, which includes e-mail campaigns, social networking sites and other Web 2.0 strategies, to demonstrate the potential power of viral marketing.

**Medina, Tenoch [38]** see Sugiyama, Saburo

**Medina Jaen, Miguel [20]** see Sheehy, James J.

**Meeks, Scott [98]** see Weinand, Daniel C.

**Mehalic, David (Coronado National Forest)**[164] *The Archaeological Geography of Small Sites of the Mogollon Rim Region*

Generations of research and cultural resources management in the Mogollon Rim region have resulted in typologies for small sites that often imply function, ranging from agrarian inspired field houses and farmsteads to the more obscure, like "carports" and isolated rooms. This GIS-based, comparative analysis examines the presumed functions of small sites within settlement and subsistence systems, as well as other ecological and social networks. Although unimpressive by themselves, these sites offer important contexts for assessing variability through space and time, including the implications of assuming that many of them are directly associated with fields.

**Mehrer, Mark (Northern Illinois University)**[82] *A Consideration of Late Neolithic Eastern China and Late Prehistoric Southeastern North America*

Late Neolithic cultures in eastern China and late prehistoric cultures in southeastern North America have different contexts, antecedents, and consequences, but some important similarities and differences are instructive when we wish to understand more fully some of the factors involved in the development of complex societies. Relevant topics include natural setting, chronology, technology, social structure, and theoretical perspective. In China, Neolithic cultures developed into state level societies but not so North America. A comparative look at our rapidly changing understandings of these two thoroughly distinct cultures can be instructive.

**Meltzer, David (Southern Methodist University), Andrew Boehm (Southern Methodist University) and Steve Emslie (University of North Carolina - Wilmington)**[190] *Investigating the environment of Folsom adaptations in the Rockies*

The relatively high density of Folsom sites in the Upper Gunnison Basin, Colorado, and the possibility these groups over-wintered there, raise several questions including how severe was the Younger Dryas climate in this mountain region, what was the structure of the environment,

and what resources were available to Folsom groups? Here we discuss results of our excavations at Cement Creek Cave, the richest high-elevation vertebrate fauna in North America that spans the past 40,000 years. Specifically, we examine what these data indicate about terminal Pleistocene climates and environments in the Colorado Rockies, and the challenges these presented to Folsom Paleoindians.

**Memory, Melissa (Everglades National Park), Margo Schwadron (National Park Service-Southeast Archeological Center) and Melissa Memory (National Park Service-Everglades National Park)**

[90] *Reconsidering Everglades Prehistory: Archeological Evidence for Holocene Variability and Early Human Settlement*

The 1989 East Everglades Expansion Act added an additional 107,600 acres to Everglades National Park. While the land was added to facilitate increased water flow into the Park from restoration projects, recent archeological investigations by the National Park Service have revealed 42 previously unrecorded significant sites. Testing of these sites included excavation into the enigmatic "calcrete" layer that had been noted on other sites in South Florida. The results of this study have much to contribute to the culture history of the Everglades, as well as inform broader scientific inquiry of the ecosystem.

**Memory, Melissa [90]** see *Memory, Melissa J*

**Menchero, Antonio [91]** see *Diaz-del-Rio, Pedro*

**Mendoza, Velia [12]** see *Vallieres, Claudine*

**Mentzer, Susan (University of Arizona)**

[175] *Micromorphology and geochemistry of the mountaintop sanctuary of Zeus on Mt. Lykaion, Greece.*

Mt. Lykaion is a Classical Greek athletic complex located in the central Peloponnese. The sacrificial altar to Zeus is an anthropogenic deposit characterized by abundant by-products of combustion including calcined bone, ash and fire-cracked rock. Micromorphological and geochemical study of the altar was undertaken in order to determine composition of the sediment and preservation of burned features. Preliminary results indicate that the effects of post-depositional processes such as bioturbation and carbonate dissolution are variable with depth. As a result, ashes are not preserved in the upper 30-40 cm of the deposit. Available phosphorus is high and correlates negatively with carbonate.

**Menzies, Adam (University of Pittsburgh)**

[65] *A comparative perspective on central place communities*

This paper focuses on the nature of household interaction (e.g. craft specialization, feasting, exchange) in central place communities in three regions in the Intermediate Area: Central Panama, Barinas (Venezuela), and the Muisca region of Colombia. A comparative perspective on the developmental trajectories of local scale communities allows us to evaluate various models for the emergence of complex society in Central America and northern South America. The organization of household production, the focus of the chiefly political economy and patterns of community growth and interaction are compared between these three regions.

**Merkel, John**

[170] *A Synthesis of Sican Metallurgy and its Analytical Methodology*

Technical studies of exported metallurgical samples from excavations of the Sican Archaeological Project have also been undertaken at University College London. This presentation includes new results for production of copper-arsenic alloys based upon technical characterisations of smelting slag, metal and ores recovered from the site and nearby mines. The use of copper-arsenic alloys in the production of tumbaga alloys is indicated by composition ratios. The deliberate selection of specific precious metal alloys for observed, desired properties is documented further. This presentation focuses on metallurgical achievements and technical skills exhibited by metalworkers during the Middle Sican Period.

**Messenger, Phyllis (University of Minnesota) [57]** *Discussant [104]* *Discussant*

**Messer, Andrea (Penn State)**

[164] *Pueblo III Reinhabited Small Sites in the Mesa Verde Region: Location, Location, Location*  
Anywhere from 35 to 50 percent of small habitation sites in the Mesa Verde area during the

Pueblo III period are reinhabited sites. The differences between reinhabited and pristine sites during this period with respect to site numbers, elevation, landform and distance from large sites can help in our understanding of settlement dynamics during this period and the factors that influenced where people chose to build their farmsteads. The rise of large, aggregated sites is well known during this time, but what effect did these large sites have on the location of farmsteads?

[103] *Discussant*

**Messner, Timothy (Smithsonian NMNH), Gary Stinchcomb (Baylor University), R. Michael Stewart (Temple University) and Steve Driese (Baylor University)**

[53] *Layer upon Layer of Late Woodland: Reconstructing the Paleoenvironment and its Relationship to Landform Evolution in the Upper Delaware Valley*

This preliminary study examines the natural and anthropogenic processes responsible for the development of stratified Late Holocene buried surfaces at 36PI4—a multi-component prehistoric site located on an alluvial terrace of the Delaware River in the Middle Atlantic region of Eastern North America. Soils/sediment as well as paleoethnobotanical analyses are used to provide a greater understanding of how paleoenvironmental and human land-use practices resulted in the accumulation of over 2 meters of deposits in under a millennium. This study will serve as a platform for further research geared toward reconstructing Late Holocene paleoenvironments and human ecology.

**Meyer, Regina (Missouri National Guard) and Kristin Leahy (NGB)**

[51] *Keepers to the Gate Way of the West; Jefferson Barracks*

The Missouri National Guard (MONG) manages and operates Jefferson Barracks near St. Louis, MO which was first established in the 1820s as the country's first "Infantry School of Practice." This property continues to meet the needs of the MONG as a significant training center. Decision-making associated with new construction and modernization must continually consider the historic nature of this National Register listed historic district, which continues to encompass historic buildings dating to the 1890s. This paper will discuss the successes of consultation in the management of Jefferson Barracks as well as the challenges in managing a property of such historic significance.

**Micham, Kathleen [162] see Mecartea, Shauna**

**Michelaki, Kostalena (McMaster University), Katherine Cook (McMaster University) and Kostalena Michelaki (McMaster University)**

[124] *Firing Ceramics in Prehistoric Calabria, Italy*

In this poster we will present preliminary results of our analysis of the firing technologies used by Neolithic and Bronze Age potters in the sites of Umbro Neolithic, Penitenzeria and Umbro Bronze in the commune di Bova Marina in southwestern Calabria, Italy. Using Scanning Electron Microscopy and macroscopic observations we will examine whether the visible changes in ceramic styles that marked the transition from the Early and Middle Neolithic to the Late Neolithic and then again from the Late Neolithic to the Bronze Age were also accompanied by significant shifts in the pyrotechnology of pot making.

**Michelaki, Kostalena [124] see Michelaki, Kostalena**

**Mickelson, Andrew (University of Memphis) and Katherine Mickelson (University of Memphis)**

[98] *Geochemical Analysis of Sediments from Mound D at the Ames Mound Complex, an Early Mississippian Center in Western Tennessee*

We present the results of geochemical analysis of anthropogenic sediments from Mound D at the Early Mississippian period Ames Mound Complex located in southwestern Tennessee. Sediment analysis combined with other data suggests a short period of utilization for Mound D as well as a reduction in occupational intensity through time. On a regional scale, Ames fits the model for initially higher investments in mound architecture ca. AD 1000-1100, followed by reduced investment thereafter, until abandonment by around ca. AD 1200.

**Mickelson, Katherine**

[98] *Human Behavioral Ecology of the Enslaved at Monticello, Virginia*

Changing patterns of land use at Monticello during the late 18th and early 19th centuries had significant impacts on the dynamics of and structure in ecological and social relationships between slaves populations. Archaeobotanical remains from slave cabins reflect these changes.

We present results of analysis from slave cabins and explore how slaves adapted to their changing ecological and social environments by shifting from a generalized mixed economy to a mixed economy with specialization on few taxa at the household level. Social ramifications are discussed.

[98] *see Mickelson, Andrew*

**Miller, Alexandra E. [96]** *see Bergin, Sean M.*

**Miller, D. Shane (University of Arizona) and Ashley M. Smallwood (Texas A&M University)**

[190] *Paleoindian Settlement in the American Southeast: A GIS-based Approach to Identify Potential Aggregation Loci*

A pattern of aggregation and dispersal is a near universal trait of hunter-gatherer groups. In this study, we use a GIS-based approach to identify potential aggregation loci in the Paleoindian archaeological record of the southeastern United States. A spatial analysis of the Paleoindian Database of the Americas (PIDBA) finds modern biases have little impact on recovery. Instead, areas with the highest density of Clovis bifaces are consistent with landscape positions used by ethnographic hunter-gatherers for aggregation loci. Finally, we discuss ways in which to integrate data at multiple scales to better understand hunter-gatherers in boreal and temperate contexts.

[190] *First Chair*

**Miller, D. Shane [190]** *see Smallwood, Ashley M.*; [88] *see Anderson, David G.*

**Miller, Heather (University of Toronto)**

[21] *Weighty Matters: Regional and Indus-wide Economic Control as seen through Indus Civilization Weights*

Throughout his career, Gregory Possehl has been instrumental in both highlighting the regionally particular character of Indus domains and examining evidence for a larger-scale pan-Indus polity. He has also been interested in the material evidence for regional interactions, most recently through late period sealings and seals. The nature of the Indus weight system, re-evaluated from a regional as well as a pan-Indus perspective, relates to all of these topics. The uniformities and diversities of Indus weights provide key insights into the nature of economic control in this ancient civilization, and thus major clues to the nature of the political system(s).

**Miller, Heidi (Harvard University)**

[21] *The Post-Urban Jhukar Phase in Sindh and its Connections with Gujarat*

From his earliest publications, Greg Possehl has championed the idea of cultural continuity from the urban Harappan to the post-urban phase in the Indus River Valley as well as in the areas beyond. He has argued that the post-urban Jhukar materials in Sindh represent a "normal process of cultural change" within the context of the demise of the urban structure, and that the major question that needs to be answered is one of cultural affiliation. Connections between the Jhukar and the post-urban phase in Gujarat have been hinted at by others, but never fully explored due to our poor understanding of the Jhukar. In this presentation I would like to honor Greg by following his cues, and examine the place of the Jhukar in relation to the urban and post-urban phases of Sindh and Gujarat in light of a recent re-analysis of the considerable Jhukar corpus from the site of Chanhu-daro.

**Miller, Julia (Catherwood Travels)**

[169] *Viewing Copan Architecture Through a Different Lens*

Architecture is the largest vestige of human occupation of a site. Architectural analysis has been a productive source of information for Maya archaeologists for generations. A new approach to architecture, based on the analysis of patterns of construction, modification, and destruction of architectural features, reveals changes in labor and social organization of the Copan society. The research upon which this interpretation is based was conducted as a part of the Early Copan Acropolis Program, directed by Robert Sharer, in Copan, Honduras.

**Miller, Katherine [169]** *see Buikstra, Jane E.*; [68] *see Maca, Allan L.*

**Miller, Myles [76]** *see Speakman, Robert J.*

**Miller, Pamela (Dept of the Army), James Zeidler (Center for Environmental Management on Military Lands), Lewis Somers (Archeo-Physics, LLC), Mark Owens (Dept of the Army, Fort Carson) and Stephen Sherman (Center for Environmental Management on Military Lands)**

[29] *The Heat is On! The Effects of Wildland Fire on Archaeological Sites*

This poster presents preliminary research conducted on approximately 50,000 acres affected by wildland fires in 2008 on Department of the Army lands at Fort Carson and the Pinon Canyon Maneuver Site, Colorado. Instituting Department of the Interior Burned Area Emergency Response/Rehabilitation (BAER) standards, personnel from Fort Carson and the Center for Environmental Management on Military Lands (CEMML) will highlight fire effects on rock art, historic and prehistoric architecture, and new site/feature visibility, as well as cultural resources management strategies related to wildland fire events.

**Millhauser, John (Northwestern University)**

[166] *Open markets and closed borders: the permeability of political boundaries in Postclassic Tlaxcala*

Liz Brumfiel has demonstrated time and again the value of systematic surface collection to explore the interconnection of economy, politics, and ecology in the development and operation of the state. I focus on the polity of Tlaxcala, an enemy of the Aztec Triple Alliance, which is often portrayed as politically and economically isolated. Recent systematic surface collections conducted by the Tlaxcala Mapping Project at the Postclassic center of Tepectipac reveal that key materials, such as obsidian, arrived from regions ostensibly under Triple Alliance control. I use this data to consider how economic interdependence can coexist with political conflict between states.

**Millis, Heather [142] see Lapham, Heather A.**

**Millon, René [115] see Altschul, Jeffrey H.**

**Mills, Barbara [13] see Huntley, Deborah L.**

**Milne, S. Brooke [168] see Hamilton, Anne C.**

**Minchak, Scott [91] see Brewer-LaPorta, Margaret C.**

**Mink, Philip (Kentucky Archaeological Survey)**

[180] *Investigating Grand Canyon Cultural Landscapes AD 400 – AD 1250: Recent Geophysical and Geospatial Mapping and Modeling*

The ecological diversity created by the vertically compacted topography of the Grand Canyon provided a unique backdrop for the development of prehistoric indigenous cultural landscapes. Using a variety of geophysical and geospatial technologies both surface and buried features have been mapped and combined with GIS models of settlement and land use. Together these technologies have provided a clearer picture of the Grand Canyon cultural milieu during the Formative Period (AD 400-AD1250). This study, while still in the beginning stages, provides a comprehensive methodology for investigating prehistoric cultural landscapes in the Southwest.

**Mistak-Caughron, Sarah (Dallas Museum of Nature and Science)**

[98] *Freshwater Mussel Analysis from Modoc Rock Shelter (Illinois) and Watson Brake (Louisiana) as a Means to Model Climate Change*

Climate change is a topic receiving attention from a variety of scientific disciplines. A way to recognize and manage modern climate change is to gain an understanding of prehistoric climate change. The Hypsithermal Climatic Interval, primarily understood on a large, continental scale, is an area of much scientific debate over whether climatic conditions in Eastern North America were blanketed or mosaic. Research using modern climate data to build a model of climatic conditions during the Hypsithermal in the Mississippi River Valley as well as to construct hypotheses to test this model using archaeological data is discussed in this paper. Methods to test these hypotheses using phenotypic and chemical data from archaeological freshwater mussel shell from the Modoc Rock Shelter (Illinois) and Watson Brake (Louisiana) sites is proposed and results from this research are discussed.

**Mitchell, Douglas (PaleoWest) and Stephanie Whittlesey (SWCA)**

[87] *Changing Burial Styles and Rituals through a Half-Millennium in the American Southwest: Implications for Identity and Interaction*

Traditionally, mortuary practices have been considered within a framework of social organization and technological style. However, burial practices also reflect ideology and ritual organization.

These elements must also be considered to discuss patterns of identity and interaction in the Southwest. This paper examines broad changes in burial practices at certain key points in time - the shift from flexed inhumation to extended inhumation in highland/plateau areas and changes in the emphasis on cremation vs. inhumation in the Sonoran Desert regions – and broad similarities in mortuary practices across different cultural areas. These patterns represent shifting emphases on utilitarian, socially based, and ritually based belief systems and organization.

**Molist, Miquel [145]** *see Guerrero, Emma*

**Mollenhauer, Jillian (University of California)**

[92] *Monuments and the Mnemonic Landscape in Formative Period Sites*

This paper will examine sculptural monuments as agents of socio-political and cultural development during the Early and Middle Formative. As transmitters of memory, capable of metamorphosis and polysemy, monuments are important elements in the construction of cultural identities and histories. The formation of mnemonic landscapes created by the juxtaposition of monuments and architectural elements served to reify mythologies and histories while grounding them in a dynamic topography of symbolic mountains, caves, and waterways; shifting between past and present, time and space.

[92] *Second Organizer* [92] *Second Chair*

**Molofsky, Lisa (University of Arizona) and David Killick (University of Arizona)**

[168] *Sources of Tin in Prehistoric Bronzes: A Novel Approach*

The search for the sources of ancient tin has been a constant theme in Near Eastern archaeology for the last forty years. Researchers have integrated studies of ancient texts, chemical analyses of archaeological finds and lead isotope analyses of copper and bronze, but the origins of tin are still not proven. In this paper, we demonstrate an innovative approach utilizing Pb isotopes to determine the source of tin in prehistoric southern African bronzes, and show how it could be employed in the search for ancient tin sources during the Bronze age.

**Monaghan, George (Glenn A Black Laboratory) and Christopher S. Peebles (Glenn A. Black Laboratory of Archaeology, Indiana University)**

[17] *Mound A Was Built First: A Piece of the Construction Chronology of the Angel Site (12VG1), a Mississippian Town along the Ohio River in SW Indiana*

Geophysics, solid-earth coring and 14C chronology indicate that construction of Mound A at the Angel site began at 900 BP by stacking 10-15 cm-thick turf blocks two meters high at the junction of the upper-lower platform and that the mound was probably built nearly its full 8m height by 890 BP. When compared with other 14C ages reported from the Angel site, the new Mound A dates show that its construction coincided with the initial occupation and indicate that the Angel population probably immigrated to the site with a preconceived town plan that was immediately implemented.

[17] *Second Organizer*

**Mongelluzzo, Ryan (University of California - Riverside)**

[64] *Creating the Veil: Controlling Sensory Perception through Architectural Design at Ancient Maya Palaces*

By analyzing the layouts of various ancient Maya palaces, it becomes apparent that some design features had either a primary or secondary function that's intent was to control or affect the sensory perceptions of the people who interacted there. Drawing mainly on examples from the palace at Holmul, but also on ones from Uaxactun, Tikal, and Aguateca, it will be shown how vision and hearing were influenced by the construction of walls, placement of doorways, use of platforms, and the particular arrangement of rooms in order to communicate statements on power and the proper social order.

**Monroe, Cara [18]** *see Wyatt, Scott D.*; [164] *see Kemp, Brian M.*

**Monroe, J. Cameron (University of California, Santa Cruz)**

[108] *A Tale of Two Cities: Urban Landscapes and Political Change in Precolonial Dahomey*

Scholars have often linked the emergence of centralized states in coastal West Africa to exterior forces, most notable the onset of the Atlantic Slave Trade. In this paper, archaeological and ethnohistorical evidence from the Kingdom of Dahomey is examined. Particular attention is granted to the discussion of urban dynamics at Abomey and Cana, precolonial political centers in Dahomey. Patterns in the nature of urban form and regional influence illuminate the spatial tactics employed by Dahomean elites to mitigate Atlantic forces and internal African political and

economic trends, revealing the complex and multifaceted nature of political centralization in the Atlantic Era.

**Montgomery, Lindsay [18]** *see Perry, Christina*

**Montoya, Andres [175]** *see Blackwell, Bonnie A. B.*

**Montufar, Aurora (INAH) and Alejandra Alonso (Proyecto Templo Mayor, INAH)**  
[38] *Archaeobotanical studies and its relevance for understanding ritual practices of Templo Mayor of Tenochtitlan*

A great diversity of plants was used in ritual practices at Templo Mayor as it is revealed by lately discovered offerings. Raw and manufactured plant materials were employed as artefacts, and comprise the essential inventory for ritual performances. This paper examines Mexica predilection for particular botanical elements, wild and cultivated, for manufacturing symbolic objects. The paper also compares the use of plant-artifacts according to their location and spatial association to other non-plant artefacts to elucidate their value and patterns of use.

**Moore, Christopher [53]** *see Jefferies, Richard W.*

**Moore, David [171]** *see Rodning, Christopher B.*

**Moore, Gordon [110]** *see Kelly, Sophia E.*

**Moore, Jerry (CSU Dominguez Hills)**  
[86] *Continuities and Disjunctions in Andean Urban Spaces: Architectural Plans and Structural Power*

A comparative analysis of prehispanic Andean cities indicates significant discontinuities in the organization of public space. Although architectonic components and architectural inventories recur in different urban traditions, there are marked differences in the overall plans of Andean cities and few continuities between the earliest Andean urban centers and earlier Formative settlements. This suggests that the prehispanic Andean city was developed divergently and employed different principles of urban design, and that Andean societies deployed different forms of what Eric Wolf called "structural power," in which the urban landscapes were the settings for different forms of power interactions through Andean prehistory.

**Moore, Palmyra (University of Tennessee) and Russell Townsend (Eastern Band of Cherokee Indians)**

[55] *From the One Feather: 21st Century Cherokee Archaeology*  
Although modern archaeology began in the 1930s in western North Carolina and has since been conducted with the goal of knowing the origin and development of Cherokee culture, significant impact on the research design and implementation of that research by the Eastern Band of Cherokee Indians is a relatively recent phenomenon. The Cherokee One Feather, a weekly newspaper, has chronicled the Band's role in the conduct of archaeology through news articles, editorials, images, and letters-to-the-editor. This presentation summarizes major archaeological events from the perspective of the One Feather.

**Moore, R. Scott [188]** *see Chiarulli, Beverly A.*

**Morales, Consuelo**

[92] *Cultural Continuity in Mesoamerica: Bitumen Use in Formative to Postclassic Veracruz*  
A naturally occurring resource in Mexico, chapopote is found along the Gulf Coast region in Veracruz and the neighboring state of Tabasco. While research regarding the use of chapopote is still in its infancy this paper argues that the ongoing procurement and use of chapopote serves as an example of cultural continuity in this region. Chapopote use among the Olmec during the Formative is examined, as is the continued utilization of chapopote during later time periods. Modern day procurement and use is also examined and compared to past uses.

**Morales, Reinaldo (University of Central Arkansas)**

[109] *Shamanism and Brazilian Rock Art*  
Shamanism is one of the most popular explanations in contemporary scholarship for the production and reception of prehistoric rock art. To varying degrees, these explanations rely on ethnographic analogies and cognitive models to propose prehistoric motivations for rock art production. In Brazil, we are gifted with both an impressive corpus of rock art and a rich



ethnographic record of art production and reception. Informed by the role of shamans in the indigenous arts of the Brazilian Indians, this paper investigates the possible relationships between shamanism and prehistoric rock art in Brazil.

**Morales, Saul and Steve Wernke (Vanderbilt University)**

[97] *Evangelización en los Andes: la construcción de una capilla y su ámbito arquitectónico en Malata, Peru.*

¿Cómo fueron construidos los primeros templos cristianos en los Andes? Esta ponencia se acerca a esta pregunta a través de datos concretos sobre la construcción, organización espacial, y remodelación de una capilla en el sitio de Malata, ubicada en el Valle del Colca. Se presentará la secuencia constructiva de la capilla, sus elementos arquitectónicos, y la remodelación de su interior, la cual quizás ocurrió junto con la construcción de un atrio y una plaza adyacente. Estos datos iluminan la escala de la labor requerida, la escala de los ritos realizados en la capilla, y la remodelación y crecimiento del sitio.

**Morales Lopez, Abel [133] see Folan, William J.**

**Morales Vigil, Erika (UNAM)**

[92] *El Formativo al norte de la Cuenca de Oriental, Puebla.*

La región geográfica de la Cuenca de Oriental se localiza al noroeste del estado de Puebla, siendo paso obligado al transitar de la Cuenca de México a la Costa del Golfo y viceversa. Este territorio fue testigo del desarrollo de la ciudad de Cantona y de la explotación de recursos naturales, como la obsidiana, al menos durante los primeros diez siglos de nuestra era. Como parte de los trabajos arqueológicos del Proyecto Arqueológico Cantona y Norte de la Cuenca de Oriental, a lo largo de ocho temporadas de campo se recorrió toda esta parte de la cuenca registrando cada asentamiento prehispánico y realizando algunos sondeos. Aquí, se presentarán los resultados preliminares del análisis de la información que atañe al período Preclásico en la región.

**Moran, Kimberlee (Forensic Outreach) [59] Discussant [28] First Chair**

**Morehart, Christopher (Northwestern University)**

[166] *Productive Landscapes and Political Change: Investigating Chinampa Agriculture at Xaltocan, Mexico*

Understanding the relationship between economic production and political processes in complex, rather than deterministic, terms is a central focus of Elizabeth Brumfiel's research in anthropology. This study, therefore, is indebted to her theoretical contributions and her long career in Central Mexican archaeology. This paper examines the creation, persistence, and decline of chinampa agriculture at Xaltocan, a site where Elizabeth Brumfiel has worked for over twenty years. Drawing on multiple data sources, it explores processes of agricultural intensification and articulates chinampa farming with the configurations of political, economic, demographic, and social factors that shaped the trajectory of this productive landscape.

**Morell-Hart, Shanti [117] see Maldonado, Doris**

**Morenon, E**

[153] *Reconfiguring 3000 Year-Old Landscapes in Urban Rhode Island*

Hundreds of C14 dates collected since 1980 document a continuous indigenous material record around Narragansett Bay. This 6000 year-old record accumulated on the surfaces, in the shell middens and other studied terrestrial sites. Rhode Island's surfaces are composites of many kinds of human action over many millennia. Late and Terminal Archaic data lie hidden within indigenous landscapes dominated by later material evidence. While frustratingly complex to unravel, this subtle material record illustrates human persistence, tradition and change. The data documents regional stability and complexity in coastal and near coastal settings.

**Morgan, Chris (Utah State University)**

[179] *Modeling Alternative Modes of Hunter-Gatherer Storage*

Storage is often perceived as a monotypic time-averager and risk-reducer. But hunter-gatherers store in different ways, using multiple technologies, each yielding ostensibly different evolutionary advantages. This paper models the economic returns and risk-reducing capacity of two types of storage: expedient, dispersed caching and formal, central-place storage, two forms of storage used by foragers in California's Sierra Nevada. It subsequently examines the ecological and social circumstances favoring one form of storage over another, this ultimately pointing not only to

the importance of understanding storage as encompassing multiple behaviors and technologies, but also to the evolutionary consequences of using different storage strategies.

[179] *First Chair*

**Morgan, Christopher [44]** *see* *Bettinger, Robert*; [44] *see* *Barton, Loukas W.*

**Morgan, Molly [58]** *see* *Kovacevich, Brigitte*; [89] *see* *Lohse, Jon C.*

**Morgan-Smith, Mary Margaret [154]** *see* *Kohut, Betsy M*

**Moriarty, Matthew (Tulane University) and Ellen Spensley (Boston University)**

[143] *Shifting Fortunes: Continuity and Change at the Ancient Maya Community of Trinidad de Nosotros, AD 550 – 950*

The interval from AD 550 – 950 was a dynamic and tumultuous time within the Maya lowlands, marked by the emergence of new dynasties, the reconfiguration of political alliances, and the transition to new forms of social and political organization. Recent investigations at Trinidad de Nosotros, an ancient Maya port on the north shore of Guatemala's Lake Petén Itzá, documented the impact of these larger trends on a small local community. Although these investigations identified significant continuities in community form and function at Trinidad, many of the changes occurring during this interval are best understood in relation to broader regional developments.

**Morin, Jesse [179]** *see* *Collard, Mark*

**Morris, Ellen (New York University)**

[141] *The Idol-Smasher is Doubly Mad*

For Latour, following Freud, Akhenaten is the original iconoclast, the unacknowledged intellectual patriarch of both Moses and the Taliban. Akhenaten's refusal to tolerate the depiction of other gods beside his chosen god—or even to entertain the notion that the word “god” could be written in the plural—supposedly mark this pharaoh as the architect of the world's first counter-religion. While rejecting any such origin-story for iconoclasm, this paper seeks to investigate the ambiguities and murky theological problems—the iconoclasm—that followed in the wake of that bold, simple move of prohibition.

**Morris, John (Institute of Archaeology, Belize) [105]** *Discussant*

**Morrison, Alex (University of Hawaii, Manoa)**

[147] *Geo-spatial techniques for determining community organization: examples from Akahanga and Vaimata, Rapa Nui*

The island of Rapa Nui is covered with a diversity of surface features offering researchers an opportunity to study community organization across the island's landscape. Sorting out temporal and spatial variability in feature distributions has proven difficult due to limited chronometric techniques for dating surface architecture. This poster applies recent advances in geo-spatial statistics, such as the variogram model and local indicators of spatial association (LISA), to generate hypotheses regarding temporal and spatial variability in feature distributions. The use of optically stimulated luminescence dating (OSL) is presented as an appropriate absolute chronometric method for researchers dating surface materials.

[147] *Third Organizer*; [147] *see* *Rieth, Timothy*

**Morrison, Jerolyn (University of Leicester) and Mara T. Horowitz (Postdoctoral Fellow, Alalakh Excavations)**

[110] *Studies in Replicating Bronze Age Cooking Fabrics from Two Mediterranean Sites*

Ceramic fabric studies when combined with experimental archaeology can create pathways of ancient pottery production to illustrate technological processes. Documenting such pathways and comparing them to artifacts helps detect the inner workings and organization of technologies that could go unnoticed, yet have an effect on site and/or artifact interpretation. We demonstrate how potting materials and fabric descriptions of Bronze Age cooking pots relate to one another at Mochlos, a Cretan coastal settlement, and Alalakh, a settlement in the Amuq Valley between Anatolia and Syria. Both sites represent distinct geological and geographical conditions that should be considered when investigating ceramic production.

**Morrison, Kathleen D. [18]** *see* *Rozo, Jennifer L.*

**Morrow, Giles (McGill University) and Ryan Patrick Williams (The Field Museum)**

[12] *Spatial Analysis through Geophysical Prospection at Mollo Kontu, Tiwanaku: Experiments and Results from the 2000-2008 Field Seasons*

Covering an area of approximately 6 square kilometers, Tiwanaku housed a population of 15,000-20,000, yet the ephemeral nature of the building materials used in the peripheral residential sector has left little visible evidence of architecture at the surface. Hampered by the inability to make large-scale characterizations of the organization of urban and monumental space through excavation alone, several geophysical prospection techniques have been employed during recent research. This paper will present how the results of topographic mapping, electrical resistivity, ground penetrating radar and magnetometry serve to clarify the broad spatial configuration of the Mollo Kontu sector.

**Morton, Allan (Paciulli Simmons & Assoc.)**

[160] *"Wealthy in Heart": Oral History of Life before Fort A. P. Hill*

In 1941, the government acquired 60,000 acres in Caroline County and hundreds of families sacrificed their lands for their country. From the government's perspective, it was a necessity. For those whose land was taken, there was no alternative but to go. For all, their stories remained untold. The oral history project identified individuals who lived on the land before acquisition and captured their history in their own words. In total, 82 hours of interviews were recorded with 58 informants. In gathering this data, a unique archive of primary historical material has been captured on the very cusp of its loss.

**Morton, Ashley (Statistical Research Inc) and Janet Griffiths (Statistical Research Inc)**

[174] *A Meal in a Dish: Food-Related Economics in an Early 20th-Century Tucson, Arizona, Neighborhood*

Multiple lines of evidence are evaluated in this study of socioeconomic status in an early 20th-century neighborhood. Faunal remains provide direct evidence of certain food choices, and those choices may provide indirect evidence of a family's socioeconomic standing. Food choices, though, are often limited by availability as well as by social constraints. Ceramics can also serve as indicators of choice and status. This study uses faunal bone and ceramics collected from privy contexts to examine consumer choice in an economically- and ethnically-mixed neighborhood. Inferred differences in public and private choices and everyday and special occasion dining practices are explored.

**Morton, Ashley** [43] *see Plumlee, R. Scott*

**Morton, Marie (Paciulli, Simmons & Assoc)**

[160] *19th and 20th Century Farmsteads on Fort A. P. Hill, Caroline County, Virginia*

As part of Fort A. P. Hill's alternate mitigation program, PSA's work on nineteenth and twentieth century farmsteads has included traditional archaeological fieldwork and research, combined with oral history, public outreach and descendent family groups. As a World War II-era base, acquisition of Fort A. P. Hill encompassed many active farms that are now archaeological sites, as well as earlier generation sites of farming activity in Caroline County, Virginia. In managing its cultural resources, Fort A. P. Hill has made an effort to go beyond typical review and compliance archaeology, and attempted to repatriate the area's history to its people.

**Moseley, Michael** [106] *Discussant* [170] *Discussant*

**Most, Rachel**

[188] *Teaching Archaeology on the Semester at Sea Program*

The opportunity for students to experience archaeology first-hand is a well-established learning tool. Such experiential learning gives students a true sense of how archaeology is done and teaches them how to interpret findings to better understand the past. In 2006 the University of Virginia became the academic sponsor of the Semester at Sea program. This paper will include a description of my academic experience leading students on a journey through the Baltic and Mediterranean, the opportunities that existed for a unique learning experience, and the advantages and disadvantages of teaching anthropology and archaeology in this unusual environment.

[188] *Second Organizer*

**Moyer, Alexandra (University of Minnesota)**

[50] *Reflections on the Co-occurrence of Mirrors and Horse Paraphernalia in Iron Age Eurasia*

During the 1st millennium BC, mirrors and horses, horse-drawn vehicles, and/or horse trappings

were frequent grave goods in elite burials across temperate Eurasia. Mirrors and horse paraphernalia were components of a "nomadic tool kit" common to many Iron Age steppe cultures; but is the co-occurrence of mirrors and horses really just a coincidence? Moreover, while nomads were doubtless instrumental in the wide distribution of both technologies, their presence together in burials of contemporary sedentary societies warrants closer investigation. This is especially true since British Iron Age mirrors likely reference elements of horse harness.

**Moyes, Holley (Wichita State University), George Brook (University of Georgia), Jaime Awe (Belize Institute of Archaeology) and James Webster (US Environmental Protection Agency)**

[83] *Ritual and the Environment: Evidence for a Late Classic Drought Cult in Western Belize*  
Caves were used by the ancient Maya of Belize since the Early Middle Preclassic period. Although they were always ritual venues, work at Chechem Ha Cave illustrates that ritual practice in caves changed over time in both form and intensity. In this paper that major changes in ritual practice during the Late Classic period are correlated with a dry period that began approximately A.D. 750. We argue that the intensity and nature of these changes are a response to changes in environment that constitute a Late Classic drought cult.

[67] *Discussant*

**Moyes, Holley [83] see Brook, George A**

**Mt. Joy, Kristen (Texas Army National Guard)**

[103] *Dramatizing Digging: Does it Hurt or Help Academic Programs?*

For many Americans, their first introduction to archaeology came through dramatizations in movies, television or video games. While there have always been documentary programs on archaeological investigations, they do not generate reach the diverse audience that fictional characters facing dangers in exotic locations do. This paper looks at how characters such as Indiana Jones, Lara Croft and others have had impacts on awareness. Do they have a role to play in generating greater interest in anthropology programs? Survey data from students will be utilized to examine the issue.

[51] *Second Organizer, [51] see Archambeault, Marie J.;*

**Mughal, Mohammad (Boston University)**

[39] *The Status of Current Research on the Indus Valley Civilization: A view from Pakistan*  
Archaeological investigations conducted in the Indus valley of Pakistan and western parts of India since 1970s have focused mostly on the fourth and third millennia BCE sites representing the post-Neolithic settlements associated with the Hakra culture that overlapped with the Early Harappan phase of the Indus Valley Civilization. The results of excavations of the Early and Mature Harappan/ Indus sites and of extensive surveys have revolutionized almost all pre-colonial explanations of the social, economic and political structures, cultural landscape, technology and other aspects of the oldest Civilization of South Asia.

**Mullin, John (Fort A.P. Hill, Virginia)**

[160] *Establishing the Fort A.P. Hill Alternate Mitigation Program*

An Alternate Mitigation Program was established at Fort A.P. Hill, Virginia, through the execution of a Programmatic Agreement among the Army, Virginia State Historic Preservation Officer, and Advisory Council on Historic Preservation. The mitigation program combines consultation, cooperative research, and purchase of an off-installation conservation easement to mitigate adverse effects to installation historic properties. Over the course of two years, interested parties were identified, consultation meetings were held, and a consensus was reached relative to what forms of creative mitigation would be acceptable. Hopefully the agreement and easement manifest a shift toward more regional, contextual, approaches to cultural resource management.

[160] *First Chair*

**Mulrooney, Mara (University of Auckland), Christopher M. Stevenson (Virginia Department of Historic Resources), Thegn N. Ladefoged (University of Auckland)**

[147] *Continuity or Collapse? Developing a Diachronic Model for Settlement and Land Use in Hanga Ho'onu, Rapa Nui (Easter Island): A Brief Progress Report*

The archaeological landscape on Rapa Nui contains a palimpsest of surface archaeological features, reflecting a long history of settlement and land use. This project aims to develop a diachronic model for settlement based on the spatial and temporal distribution of archaeological features in an 8 km<sup>2</sup> project area. This paper presents preliminary results of the chronometric dating of residential features using obsidian hydration dating and a GIS-based analysis of surface

features. A model for settlement based on the preliminary findings is presented, which will be revised and tested using additional data collected during the next year.

[147] *Second Organizer*

**Muñiz, David (Centro INAH Durango) and Jose Luis Punzo Diaz (Centro INAH Durango)**  
[132] *New data about the expansion of the Northern frontier of Mesoamerica, during classic in Durango México.*

Around the year 600 a.D. in the valley of Guadiana, Durango, Mexico, starts to appear mesoamerican cultural items, like pyramids, ballgame courts, sunken patios, and a rich iconography, related to the Chalchihuites Culture. That reflects the expansion of the northern Mesoamerican frontier, from the actual border of Zacatecas and Durango, 300 kilometers to the North. The present paper presents new data that allow us to understand this process through archeological remains located recently in almost 100 sites, as well as excavations and dating realized during the last 5 years in the outskirts of Durango City Mexico.

**Munoz, Cynthia [53]** *see Mauldin, Raymond P.*

**Muñoz, Lizette (University of Pittsburgh), Alicia Boswell (UCSD), Andrew Somerville (UCSD), David Goldstein (Universidad Peruana Cayetano Heredia) and Paul Goldstein (UCSD)**

[81] *Growing Tiwanaku: Social identity and plant use in domestic and funerary contexts*

This presentation is based on the analysis of botanical remains from Tiwanaku domestic and funerary settings at the Rio Muerto site, Moquegua, occupied during the Chen Chen Phase (C.E. 725 – 950). Drawing on the archaeobotanical dataset of a contemporaneous household located close to the Omo Temple, we establish a comparative framework that assesses the economic and symbolic value of plants in both ritual and domestic contexts of this sundry population. A paleoethnobotanical approach to this information has yielded a more precise image of this group's connections to the altiplano and its social particularities fostered by its mid-valley environment.

**Murano, Masakage, Hiroto Fukuda (JOCV/JICA in El Salvador) and Kenji Kanegae (International University of Kagoshima)**

[2] *A case study of the public archeology in El Salvador: archaeological analysis of the Usulután style ceramic and its utilization as a resource of tourism and education*

This paper presents the results and processes of a project of the public archaeology in El Salvador. It address one of the important issues in public archaeology that how can we connect the results of archaeological studies with the benefits of local community. The Usulután style ceramic, whose origin is in El Salvador but its original technique has already disappeared there, was studied by physical and chemical analyses such as Gandolfi camera, EDX, etc., and by archaeological experiments collaborating with ceramists, in order to resurge the ceramic technique and utilize it in developing resources of tourism and education.

**Murata, Satoru (Boston University) and Francesco Berna (Boston University)**

[102] *Geoarchaeological approaches to studying pottery and salt production in the Maya lowlands*

Study of pottery production in the Maya region so far has been hindered by the near complete lack of pottery kilns found in the archaeological record. Recent research at Wits Cah Ak'al in Belize, Central America, indicates that it was a specialized salt and pottery production site from the Late Preclassic to the Terminal Classic periods, making it an optimal test case to look for non-artifactual evidence of pottery (and salt) production. We use SEM, FTIR, and micromorphology to analyze the presence/absence of processes such as pyroactivity and salt permeation into ceramics through brine boiling.

**Murillo Herrera, Mauricio and Alexander J. Martin (University of Pittsburgh)**

[65] *The Range of Social Structure within the Intermediate Area: Two Cases*

Comparative works in the Intermediate Area have focused on the study of the similarities amongst regions, primarily because classificatory schemes are privileged. However, to ascertain what social variables were more preponderant in social change, differences are more enlightening since they can highlight the mechanisms behind this change. In our paper two trajectories of social change—San Ramón, Costa Rica and Manabí, Ecuador—are compared. By analyzing differences among different social variables in these two cases we expect to find patterns in the way different social variables relate to each other and to the general process of social change.

**Murphy, Christopher [163]** *see* *Trunzo, Jennifer M.*

**Murray, Matthew (University of Mississippi)**

[143] *Devolving Communities: Settlement Behavior and Social Organization during the Neolithic in Southeastern Germany*

In this paper, I combine original survey data with published information to explore change in settlement behavior and society in Bavaria during the Neolithic period (5500 to 2200 BC). Early agricultural colonists initially focused on a specific ecological adaptation while maintaining strong communal practices. During the Middle Neolithic (ca. 4800 BC), these large communities began to fragment, expanding into previously marginal ecological zones and transforming traditions of social representation in mortuary behavior and domestic space. By the later Neolithic (4000 BC), the representation of "community" was challenged by the appearance of cults of individual – rather than communal – identities.

**Murray, Wendi (University of Arizona)**

[29] *"The Gods Above Have Come": A Contemporary Analysis of the Eagle as a Cultural Resource in the Northern Plains*

Eagle protection legislation has historically placed severe constraints on eagle trapping traditions among tribes of the Northern Plains. In light of the recent delisting of the eagle as an endangered species, the University of Arizona, the National Park Service, and the Mandan, Hidatsa, and Arikara Nation are collaborating in the identification of continuities and discontinuities in eagle knowledge and the acquisition and use of eagle parts, documentation of eagle trapping and associated ceremonial site locations on federal lands in North Dakota, and the future incorporation of indigenous knowledge and perspectives about eagle trapping sites into parks' resource management strategies.

**Murray, William**

[84] *Rock Art and Early Mesoamerican Writing Systems*

The possibility that prehistoric rock art could include logograms which were later incorporated into the pictographic writing systems of pre-Columbian Mesoamerica has remained largely unexplored by archaeologists and rock art researchers. Nevertheless, recent advances in the study of Mesoamerican scripts and a broader data base on Mexican rock art begin to close this gap. Potential links refer to both iconography and context and imply an intermediate stage in which representations were transferred from rock surface of other physical media.

**Myer, Jennifer [42]** *see* *Hammerstedt, Scott W.*

**Nado, Kristin (Arizona State University)**

[18] *Violence and Trauma at the Chavez Pass Ruin: An Evaluation of the Warfare Model of Pueblo Formation*

One explanation for the reorganization of settlement patterns and increases in site size during the Southwestern Pueblo IV period is that endemic warfare necessitated the development of defensive settlement strategies. This research evaluates a skeletal sample from the Chavez Pass Ruin for the frequency and patterning of trauma in order to evaluate whether increased site size during this period may have served a defensive purpose. Compared to data from smaller Southwestern sites, results challenge the idea that increased site size bestowed concrete defensive benefits to the residents of large pueblo sites, though the existence of perceived benefits is not discounted.

**Nagaoka, Lisa (University of North Texas), Ben Fullerton (University of North Texas), Julie Densmore (University of North Texas) and Steve Wolverton (University of North Texas)**

[53] *Subsistence context of pottery evolution in southeast Texas*

About 2000 years ago, the prehistoric mobile foragers who lived along the Texas coast began to make pots. Unlike other regions, pottery is not linked to intensive seed exploitation. Thus, to understand the reasons for pottery adoption, we need to understand the broader subsistence context into which it was adopted. During the Late Archaic, human populations expanded and deer harvest pressure increased. Changes in decisions regarding prey and patch choice, carcass exploitation, and within-bone nutrient exploitation are expected. These subsistence changes may be shed light on why pottery became important to south Texas Native Americans.

**Nagel, Cindy [188]** *see* *Hedden, John*

**Nair, Udaysankar [83]** *see* *Sever, Thomas*

**Naji, Stephan [156]** *see D Alpoim Guedes, Jade*

**Nakamura, Oki**

[167] *Prehistoric landscapes in Hokuriku district, Japan*

Landscape is social. With considering social contexts of subsistence, trade, ritual, this paper shows formation and changes of landscapes on the Japan seacoast in prehistoric period, from 5000 BC to 600 AD. On one hand, a landscape was the foundation for the next landscape; on the other hand, another landscape is abandoned. Landscape changes are not only in physical but also in mental, such as social value of them. I also would like to show that the observation of continuity and discontinuity in landscapes during long-term history is useful to understand characteristics of after prehistoric period, from ancient to present.

**Nakassis, Dimitri (The University of Toronto)**

[187] *Structuration and the state in Late Bronze Age Greece*

This paper models the Mycenaean state from the perspective of Giddens' theory of structuration, in which structures "are both medium and outcome of the practices they recursively organize." The administrative texts found in the palatial center provide information about a large number of named individuals, many of whom must have been elites with substantial personal holdings. These agents were managers of economic activity controlled and monitored by the palace. The Mycenaean state is profitably analyzed as a structure reproduced by individuals, whose economic and social strategies are both enabled by the state and constrained by it at the same time.

[187] *First Chair*

**Nales, Thijs [99]** *see VanderPoppen, Robert E.*

**Napolitano, Matthew (Univ. of West Florida), Elizabeth Drolet (American Museum of Natural History) and Matthew C. Sanger (Columbia University and the American Museum of Natural History)**

[46] *Rings of Interaction: Function, Relation, and Organization in the Late Archaic Southeast*  
Architectural redundancy within contemporary archaeological contexts generally suggests similarity in function, usage, and histories. But when redundancy occurs within large-scale, monumental features, such as Late Archaic shell rings in the American Southeast, broader social redundancies - such as multiple populations, divergent identities, and competitive moieties, are suggested. Most shell rings found in the Southeast are paired with one or more rings. The radiocarbon record, material culture, and site morphology from several of these rings - including two currently being excavated on St. Catherines Island - will be presented and compared to evaluate the level and manner of interaction between the sites.

**Nash, Donna (UIC) and Monika Barrionuevo (Programa Contisuyo)**

[45] *Wari Imperial Demography: origins of Cerro Mejía settlers in Moquegua*

Wari expansion into Moquegua was originally interpreted as an intrusive colony with two major settlements, Cerro Baúl and Cerro Mejía. Ayacuchano migrants, presumed to occupy both hills, established Wari imperial infrastructure. Over the last decade, comparisons between Baúl and Mejía living space, diet, and material culture reveal stark contrasts beyond mere class differences. Recent excavations on Mejía demonstrate its occupants were neither Ayacuchano nor local, but moved to Mejía from another Wari province. In this paper, we describe evidence for these 'local foreigners' at Cerro Mejía and discuss the implications for non-Wari migrants in the intrusive Moquegua colony.

**Nash, Robert (University of California, Davis)**

[41] *The Role of Maize in Low-Level Food Production Economies of Northeastern Utah*

This research investigates low-level food production north of the Uinta Mountains of northeastern Utah during the Fremont period. The region is at the northern fringe of agricultural expansion, providing a unique opportunity to gain insights into the character of low-level food production economies. I argue that maize was used for tactical purposes in order to maintain foraging efficiency and sustain hunter-gatherer economy, and that agriculture maintained foraging efficiency by prolonging access to high-ranked resources. Stored cultigens along the northern slope of the Uinta Mountains may have allowed hunter-gatherers more time to spend in the pursuit of high-ranked resources.

**Nass, Jr., John**

[52] *The Jones Site: an early Monongahela Settlement in Greene County, Pennsylvania*  
Like many archaeologically defined traditions, some portions are better known than others. This is no different for the Monongahela Tradition of the lower Upper Ohio River Valley. While its internal chronology has been broadly defined, single component settlements from the earliest portion, c. AD 1050 -1200, are exceedingly rare. An exception is the Jones Site situated along Ten Mile Creek in Greene County, Pennsylvania. Radiocarbon-dated to AD 1100 -1220, nine field seasons have exposed some 3,000 square meters of the settlement. The results of these excavations are presented with an emphasis upon the inhabitants' subsistence, their technology, and the site's structure.

**Naumec, David [116]** see Mancini, Jason R.

**Navarro Farr, Olivia (Southern Methodist Univ.)**

[48] *Discarding "Trash": Reconceptualizing Above-Floor Deposits Excavated at El Peru-Waka's Structure M13-1*

Mesoamerican scholars recurrently utilize the concept of trash to characterize a variety of discard behaviors resulting in above-floor deposits. Given the term's inherently western connotations, its uncritical application to above-floor deposits is problematic and can mask an untold variety of symbolic meanings that may actually be exhibited. This paper employs practice and behavioralist theoretical approaches with contextual analyses of numerous above-floor deposits excavated throughout El Perú-Waka's Structure M13-1. Though discarding the term "trash" where warranted is not intended, exploration of its implausibility as a description of the deposits at M13-1 and for other contextually and materially similar deposits is overdue.

**[48]** First Chair **[48]** Second Organizer

**Nazaroff, Adam (University of New Mexico) and Lee Drake (University of New Mexico)**

[49] *Examining the Validity of PXRF for Obsidian Sourcing in the Maya Lowlands*

Recent innovations in Portable X-ray Fluorescence (P-XRF) technology have increased the application of P-XRF for the geochemical characterizations of artifacts in the field, reducing the cost and time of analysis. However, speculations concerning the utility of P-XRF data have been raised. Currently, research demonstrates variable results at regional scales. Concerning Maya archaeology, the validity of P-XRF has yet to be determined. This study examines the accuracy and validity of P-XRF analysis of obsidian artifacts from the Maya sites Ek Xux and Uxbenká as compared to data acquired from Energy-dispersive XRF to ascertain the effectiveness of P-XRF in the region.

**Ndiema, Emmanuel [168]** see Dillian, Carolyn

**Neff, Hector (California State University-Long Beach)**

[76] *Twenty Years of Ceramic Provenience Research at MURR*

The MURR archaeometry lab has been producing reliable INAA data for ceramic provenience research since 1989. Some projects have produced unsurprising results, whereas others have had dramatic impacts on understanding of the archaeological record of particular regions. My goals in this paper are to survey some of the high points and to identify some common features of the best projects.

**[168]** Discussant **[58]** First Chair; **[58]** see Abella, Adrian; **[58]** see Safi, Kristin N.; **[58]** see Quach, Tony T.; **[92]** see Gomez, Josue A.; **[58]** see Kovacevich, Brigitte; **[58]** see Castillo, Victor J.

**Neff, Margaret (Northern Arizona)**

[27] *Methodological approaches to GIS database assembly: Cerro Jazmin GIS database*

This paper discusses the methodological approaches employed to create and manage a GIS database from the data generated by the Cerro Jazmin Archaeological Project. The scope of the project necessitated computer-based methods, in data collection, storage, visualization, and analysis. The assembly of the 2008 field data into a GIS database was essential for maintaining data integrity and coherence. Two- and three-dimensional models enable visualization of the site and data patterning, and precise calculations of terrace area, residential area, and land usage through time. These calculations make possible an analysis of population size and distribution across space and through time.



**Negus Cleary, Michelle (University of Sydney)**

[63] *Fortresses and Canals: the domination of the oasis landscape of Chorasmia during the mid-late 1st millennium BCE - early 1st millennium CE*

The ancient period fortresses of Chorasmia from the 4th century BCE - 4th century CE, embody prestige, power and control in the oasis zone of the Amu Darya (ancient Oxus) delta. The massive fortress walls were visually impressive propaganda. The presence of fortified sites and large irrigation systems were not necessarily indications of a centralized, urbanized state, especially in this zone of nomadic pastoral production. GIS mapping of the oasis landscape explores the spatial patterns defined by fortresses, farms and canals. Scale, spatial relationships and distribution of fortified enclosures in the oasis landscape allow for new interpretations.

**Neiman, Fraser [99]** see Galle, Jillian E.; [53] see Clites, Elizabeth A.

**Neitzel, Jill (University of Delaware)**

[87] *Identity and Macro-Regional Interaction in the U.S. Southwest*

This paper synthesizes the contents of all of the papers presented in this symposium on identity and macro-regional interaction in the U.S. Southwest. Identity is multi-faceted, defined and communicated in a myriad of ways, and always involves interactions with others. In contrast with the narrow focus of most previous Southwest identity studies, the symposium papers employ a broad view to document the spatial and temporal patterns for various cultural and biological characteristics throughout the Southwest. This paper compares the results of these characteristic-specific studies and considers the implications of redundant and varied patterns for the issues of identity and interaction.

[87] *First Chair*

**Neivens De Estrada, Nina (Tulane University) and Francisco Estrada-Belli (Boston University)**

[192] *From Pottery to Temples; Changes in Preclassic Maya Complexity at Holmul, Peten, Guatemala*

Recent data from Holmul reiterate the complexity of the Preclassic Maya. This is one among a few sites with ceramics of the Pre-Mamom sphere, sharing types with the Lowland's earliest Eb and Cunil spheres. These ceramics are found in the foundations of the site's earliest temples exclusively. In the Middle and Late Preclassic periods ritual platforms were constructed in Group II. Two pyramidal structures dating to 400BC were adorned with elaborate stucco masks. This archaeological sequence reveals the increasing social complexity of the Preclassic Maya and a persistent set of iconographic symbols from ceramics to sculpture.

**Nelson, Ben [132]** see Kantor, Loni; [10] see Somerville, Andrew D.

**Nelson, Katherine (Tulane University) and Ashley Heaton (Tulane University)**

[60] *Old Polities and New Cemeteries: The Establishment of the Chancay in the Huaura Valley*

The Late Intermediate Period in the Huaura Valley is part of the Chancay Cultural Sphere. The emergence of the Chancay in the Huaura Valley includes the establishment of new architecture and pottery styles and the construction of habitation sites in different locations distinct from Middle Horizon architecture. In addition, the Middle Horizon sites are used as Late Intermediate cemeteries. This disconnect between residential space and important changes in architectural layout highlights the restructuring of the social and political systems and the wide distribution of Chancay style pottery asserts the formation of a new economic sphere as well. Together, these many changes reveal the formation of a new regional polity that replaces the previous one.

[60] *Second Organizer*

**Nelson, Margaret (Arizona State University)**

[1] *Long-term vulnerability and resilience*

Archaeology brings time depth to an array of issues from migration and resettlement to climate change and environmental impacts of human actions. The long-term does not provide predictions for future courses but it does provide an example, an experiment of sorts, by which we can come to better understand processes and relationships. Our collaborative study of long-term relationships between ecosystems and social systems in the prehispanic and protohistoric US Southwest and northern Mexico examines key concepts employed by scholars and policy-makers in the Resilience Community. Their concern is with promotion of social and environmental policies that build resilient systems that can flexibly respond to uncertain future conditions and avoid catastrophic transformations. In this paper I describe our work on three key concepts: rigidity, diversity, and tradeoffs.

[137] *Discussant*

**Nelson, Zachary (ENTRIX, Inc.)**[103] *YouTube Archaeology*

The internet provides a democratizing force in archaeological content. Unfortunately, democracy is not always tied to content, logic, reason, or professional content. The web portal YouTube.com provides a cross-cultural (in a very broad sense) spectrum of archaeological depictions ranging from cartoonish to professional. This spectrum informs the public in ways that traditional classes do not. Although content is posted, it is not always accessed. Popularity is an important aspect of virtual democracy. This paper discusses the medium, format, and interest in archaeological content on YouTube.com.

**Neumann, Thomas (Wentworth Analytical)**[152] *The Microlithic Compound Tool Industry at 36AL480 (Leetsdale Site)*

Re-examination at low- and high-magnification of the debitage from prehistoric site 36AL480 (Leetsdale Site), a deep multi-component Middle Archaic - Early Woodland site located west of Pittsburgh, found that 17 - 33 percent of flakes under 1.0 g -- originally discounted as unmodified -- were heavily-used microliths. Materials from 36AL480 show that the prehistoric microlithic compound-tool industry -- already documented from New York through eastern Pennsylvania and Maryland south into the Carolinas and Georgia -- was operative as well in the upper Ohio Valley. The results underscore the need for small so-called "waste flakes" to be examined closely for use before being dismissed as unmodified.

**Neusius, Phillip (Indiana University of PA)**[53] *A Tale of Two Lithic Collections: Arthur Parker and the Ripley Site*

Although Arthur Parker originally reported Ripley as an Erie village, reanalysis of Parker's collections indicated the site served as a mortuary campsite. One key to this conclusion was the lack of variability and high degree of facial regularization in the lithic sample. Recent excavations yielded a more representative sample of material classes as a test of our conclusions based on Parkers sample. The analysis of the lithics from this collection still reveals a lack of variability in tool forms, but a wider range of expedient trajectories for stone tool manufacture.

**Neusius, Sarah (Indiana University of PA) and Beverly Chiarulli (Indiana University of Pennsylvania)**[52] *How Many Components Are there? Investigating the Late Prehistoric Occupation of the Johnston Site*

In regional Monongahela chronologies the Johnston site, 36IN2, located along the Conemaugh River in Indiana County, Pennsylvania, has been considered a Late Monongahela village dating between AD 1550-1600. This conclusion has been based largely on ceramic collections obtained in 1952. However, radiocarbon dates obtained after our recent excavations indicate that Johnston was occupied between the 13th and 15th centuries. These dates as well as the presence of at least two stockades raise the possibility of multiple components. Various stratigraphic and artifactual analyses as well as additional radiocarbon dating provide tests of this explanation of our chronological findings.

[52] *First Chair***Neuzil, Anna (EcoPlan Associates, Inc.)**[18] *The Ephemeral Nature of Ancient Identity in the Western Papageria: A Case Study from the Barry M. Goldwater Range, Southwestern Arizona*

Identity in the ancient past is often defined on the basis of material culture traits found in the archaeological record. The Western Papageria of southwestern Arizona and northwestern Sonora has a notoriously ephemeral archaeological record with few distinctive markers representative of identity, yet delineating the identity of the ancient inhabitants of this area is central to understanding every aspect of its past. This poster will explore ways in which the identity of people who produce relatively few and ephemeral material culture remains can be characterized and interpreted, using the Western Papageria as a case study.

**Newsom, Bonnie (Penobscot Nation)**[173] *Ceramics, Archaeology, and the Penobscot Indian Nation*

"I didn't even know our ancestors made pottery!" This quote from a Penobscot Nation tribal member is reflective of a colonial process that has interrupted the flow of information from past to present. Through an indigenous archaeologies approach, the Penobscot Indians have asserted their rights to reclaim that information and are defining for themselves a process for engaging with the materialities of their ancestors. This paper discusses aboriginal ceramic research at the

Eddington Bend site in central Maine and highlights an analytical approach defined by the voices and values of the Penobscot people.

**Newsome, Elizabeth (University of California-San Diego)**

[112] *Art and Artifact Agencies: The Art of James Luna and Michael Kabotie*

Artists and archaeologists have equally intense, although different engagements with the meaning and agency of objects in material culture. The same can be said for native people and researchers whose concerns with archaeological and ethnographic materials can both contrast and coincide. Two distinguished Native American artists, James Luna (Luiseno) and Michael Kabotie (Hopi) speak to the connections and divergences they have explored in their careers between art and archaeological practices. In distinct ways, each has referenced archaeology to activate and revitalize the roles of artifacts and images, expanding their powers to critique, to heal, and to interact with contemporary audiences.

[112] *Second Chair* [112] *Second Organizer*; [112] *see VanPool, Christine S.*

**Nicholas, George (Simon Fraser University) and Julie Hollowell (DePauw University)**

[174] *Meeting the Challenges of Intellectual Property Issues in Cultural Heritage: Introducing the IPINCH Project*

A wide array of intellectual property (IP) concerns relating to cultural heritage is now part of the archaeological landscape, affecting practitioners, descendant communities, and policy makers alike. The "Intellectual Property Issues in Cultural Heritage Project" (IPinCH) brings together scholars and practitioners from many different fields to collaborate with partnering organizations and communities in an exploration of these issues through community-based participatory research. The Project's objectives are to document the diversity of situations and concerns arising in regard to IP issues in cultural heritage, to analyze the theoretical and practical implications; to identify norms of good practice; and to make these findings and other resources broadly available.

**Nichols, Deborah (Dartmouth College)**

[166] *Rethinking Huitzilpochtli's Conquest: Liz Brumfiel, Social Theory, and the Aztecs*

Liz Brumfiel began work in Aztec studies by tackling nothing less than testing the economic symbiotic model of Aztec exchange and specialization. Her findings at Huexotla and Xico questioned this model and in its place Brumfiel has focused on the politics of exchange and strategies of both state power and commoner households. Her long-term archaeological project at Xaltocan builds on and expands those themes by applying social theories to understand Aztec society, and inequalities more generally, from a bottom-up agency perspective. These intellectual commitments also motivate Brumfiel's engagement with community archaeology and her professional leadership.

[99] *see Alex, Bridget A.*; [166] *First Chair* [166] *Second Organizer*

**Nicholson, Christopher [88] *see Arakawa, Fumiyasu***

**Nicolau, Armando [132] *see Caretta, Nicolas M.***

**Nicolay, Scott (CARST)**

[67] *Reconstructing the Cave: Speleothems from Archaeological Contexts in the Southwest*

Cave formations or speleothems have been recovered from archaeological contexts in the Southwest, but reporting has been inconsistent. To make matters worse, since many speleothems are unmodified, they do not qualify as artifacts, while others may be so heavily processed as to be unrecognizable. To date no systematic study has attempted to document their distribution or interpret their use and meaning. Preliminary research suggests that some speleothems were considered to be living beings, and functioned in a variety of ritual contexts. Patterns of speleothem harvesting and use in the Southwest show parallels with those documented in Mesoamerica and the Southeast.

[67] *First Chair*

**Nielsen, Axel (CONICET Argentina) and Florencia Avila (CONICET Argentina)**

[151] *Beyond Caravans: An Inter-nodal Approach to Interregional Circulation in the Precolumbian South Andes*

Focusing on archaeological evidence left in marginally occupied areas ("inter-nodes") by the practices responsible for the transportation of goods between permanently settled regions ("nodes"), we identify two general modes of long-distance circulation. Specialized traffic involved journeys that left only ephemeral but distinctive remains of their transit through the "internodes."

Embedded traffic, on the other hand, took place in the inter-nodes, where task groups from distant regions converged seasonally to hunt and gather, engaging in multiple forms of exchange as part of these periodic, multi-ethnic encounters. We discuss the social implications of these different but partially overlapping forms of circulation.

**Nilsson Stutz, Liv (Emory University)**

[8] *Correcting Cadavers. The Ritual Response to the Anxiety of Death.*

At the death of an individual, the survivors are left not only with complex emotions, but also with a human cadaver. The abject status of the cadaver (Kristeva 1980), located between subject and object, between living being and human remains, creates anxiety as it challenges the ontological order of life. Ritual becomes a strategic way to act in response to this state. Through a combination of ritual theory and an archaeological methodology focused on recovering the treatment of the body we can recover the traces of these actions and discuss anxiety as a dimension in mortuary practices.

[137] *First Chair* [137] *Second Organizer*

**Nisengard, Jennifer (Los Alamos National Laboratory)**

[88] *The Land Conveyance and Transfer Project: Proactive Cultural Resources Management*

Los Alamos National Laboratory is situated on the Pajarito Plateau in north-central New Mexico. There is a high density of archaeological sites on Laboratory lands, with a ratio of one site per six hectares. Federal laws require archaeologists to identify, evaluate, and protect cultural resources eligible for the National Register of Historic Places. Reliable and cost-effective eligibility determinations are crucial to land use decisions. From 2002 to 2006 the Laboratory conducted an intensive excavation project. This paper presents data from these excavations that can be used to direct and guide eligibility determinations and cultural resources management decisions at the Laboratory.

**Nishimura, Yoko (UC Santa Cruz)**

[86] *North Mesopotamian Urban Space at Titri<sup>9</sup> Höyük in the Third Millennium B.C.*

Extensive magnetometry surveys and horizontal excavations were carried out at the late-third millennium city of Titri<sup>9</sup> in southeastern Turkey. The combination of these data provided me with an extremely valuable and unprecedented case-study from which to generalize about the layout of the third-millennium urban settlement in the Near East. The analysis of the magnetometry data also allowed me to outline the organization of the streets, explore possible locations of elite neighborhoods and public structures, and conduct a population estimate of the settlement. Overall, the extensive lower city at Titri<sup>9</sup> consisted of segregated communities.

**Noble, Vergil (National Park Service)**

[88] *Exceptional Places: Archaeological Significance and the National Historic Landmark Program*

Most American archaeologists are well versed on the National Register of Historic Places and the criteria used in determining the eligibility of sites. Relatively few practitioners are familiar with the much older National Historic Landmark status of Federal recognition for cultural properties. This poster outlines the differences between the two programs with specific reference to the question of "significance." Several archaeological sites in the Midwest are highlighted.

**Noe, Paul (Syracuse University) and A. Brooke Persons (University of Alabama)**

[5] *A Reappraisal of Ceramic Chronologies in Banes, Eastern Cuba*

Our work addresses the need for a more thorough consideration of the chronological framework for the Ceramic Age in Eastern Cuba through a recalibration of published radiocarbon dates from the region and a reexamination of a ceramic sequence utilizing correspondence analysis. Our research indicates that the Ceramic Age sequence is much shorter than originally thought. Additionally, while a regional sequence based on incised designs is generally accepted for the Banes region of Eastern Cuba, further refinement is possible. Thus, we present a revised ceramic sequence for the Banes region, examined using ceramic collections from the site of El Mango.

**Noll, Christopher (WSU) and William Andrefsky, Jr. (Washington State University)**

[41] *Late Holocene Occupation Of The Birch Creek Site (35ML181), Southeastern Oregon*

The Late Archaic Period of the Northern Great Basin is relatively unknown through excavated remains. Excavations at Birch Creek Site along the Owyhee River have a carbon dated component at 1310 to 1118 BP. and reveal that occupants were non-specialized foragers who may have replaced an earlier more focused settlement and subsistence strategy. Site occupants exploited a broad spectrum of plant and animal resources including various seeds and equal proportions of large and small game during a period of elevated relative aridity. They entered the

region with bow and arrow technology, ceramic technology, and used multiple forms of ground stone technology.

**Norder, John (Michigan State University) and Dillon Carr (Michigan State University)**

[84] *From Maker/Meaning to User/Caretaker: Shifting paradigms in understanding the rock art of the Canadian Shield*

Examinations of rock art typically focus on creation and compositional meaning with little attention paid to the fact that these places form historical palimpsests on the social landscape. As such, their recognition and importance within social memory are subject to invention and reinterpretation as the priorities of descendant populations shift over time. We examine how oral histories of historic and contemporary First Nations in northwestern Ontario demonstrate the role social memory serves in preserving and allowing for changes in emic understandings of these sites. The results of this altered focus reveal the transgenerational and transcultural endurance of these places.

[22] *Discussant*

**Norman, Neil (William and Mary)**

[8] *Feet of Clay: An Archaeology of Huedan Elite Anxiety in the era of Atlantic Trade*

In archaeological accounts of the Dahomey Gap region, elite West Africans are often characterized as bellicose regional administrators and iron-fisted military commanders. Previous studies focus on the role of artifacts and architectural features in projecting and bolstering their authority. This paper addresses a more subjective state of elite African existence; the anxiousness inherent to a region rocked by slaving raids and wholesale warfare. It argues that archaeologically recovered earthenware offerings, originally placed under living surfaces and in household shrines, played an active role in mitigating such anxiety by providing concealed sources of protection and private points of reflection.

[8] *First Chair* [8] *Second Organizer*

**Norman, V. (ARCON, Inc.)**

[99] *Izapa, Mexico Astronomy-Calendar*

The breadth and depth of Izapa's data comes from an accurate record of extensive sculptures intact and fully integrated with a master temple design plan involving topography, astronomy, geometry and measures for producing empirical data to decode world view, calendars, history and interpret cosmology and religion. Deciphered Long Count and Calendar Round dates on Stela 12 record a new year-new fire sacrifice-commemoration on autumn equinox 176 B.C. to celebrate 8 Calendar Rounds and 260 Venus synodic cycles in 416 years from an Izapa dynasty base date fixed at autumn equinox 592 B.C. Stela 5 records the 5 world ages.

**Norris, Sean (TRC), Michael Stoner and Ramona Grunden (TRC)**

[14] *Excavations at 38CH2105 a Colonial Period Trading Site on James Island, South Carolina*  
38CH2105 is a multi component site on James Island, South Carolina. The property belonged to Captain Jonathon Drake, an Indian Trader and militia officer who was active in Carolina affairs from 1690 until after the Yemassee War. Excavations revealed a discrete late 17th – early 18th century occupation containing European and Native American wares and a large amount of faunal remains. While there is a substantial collection of plain, low-fired earthenware, these do not appear to be African-American in origin. 38CH2105 offers a unique glimpse at early interaction between colonists and Native Americans, without masking that occurs with African-American artifacts.

**Nott, BreAnne (Washington State University), Brian M. Kemp (Washington State University), John Jones (Washington State University) and William D. Lipe (Washington State University)**

[164] *Palynological Analysis of Ancient Domestic Turkey Droppings from the American Southwest*  
Domestication of and/or the introduction of domesticated plant and animal species had fundamental impacts on societies of the American Southwest. Domestication of the turkey introduced a novel protein source for peoples in the region. Previous palynological analyses of 1600-2100 year old turkey droppings (coprolites) from the Turkey Pen Ruins site suggest that they may have originated from both wild and domestic birds. Recent genetic evidence of other coprolites from the site suggests they all originated from domestic birds alone. This study provides palynological data to the same samples in order to evaluate previous conclusions based on pollen data alone.

**Novak, Shannon (Syracuse University)**

[177] *How to say things with bodies: The semiotics of violence on the Mormon frontier*  
 Dead bodies are powerful media for conveying political messages. Yet to understand what is being communicated, we must consider events from the perspectives of both the performers and their audiences. Moreover, we must be aware of the supremely ambiguous nature of human remains—their capacity to say different things to different people. During a single performance, political actors can draw and redraw group boundaries, uniting some people while excluding or even threatening others. Here I focus on the 1857 Mountain Meadows massacre, one case in which human remains have been deployed to communicate an array of political messages.

**Novotny, Anna (Arizona State University) and Laura Kosakowsky**

[130] *Burials and Caches from the Chan Site E-Group: A Bio-archaeological Perspective*  
 Recent research proposes that ancient Maya commoners contributed to the continued formation of greater Maya belief systems through local ritual activity. At the Chan site, a small agrarian community in the Belize Valley, construction of a tripartite “E-group” architectural complex in the Late Preclassic developed a space for community ritual and linked Chan to broader social and political changes in the Maya lowlands. Using bioarchaeological, ceramic, and architectural evidence, we explore ritual activity to address how the residents acted within a pan-Maya belief system, and structured this belief system given their unique social and historical context.

**Novotny, Anna [112]** see Carr, Christopher

**Novotny, Claire (University of North Carolina - Chapel Hill)**

[68] *The Future of the Past: Contemporary Identity Formation and Ancestral Material Heritage among the Maya of southern Belize*  
 Archaeologists evaluate materiality as one avenue in the complex process of identity formation. Focusing on Mopan and Q'eqchi' Maya villages in the Toledo District of southern Belize this research explores how cultural identity is constructed in relation to an ancestral past inscribed on the local landscape by archaeological sites. Initial survey data suggest that perception of Belize's ancient past differs between communities. This paper explores the intersection of ancestral material heritage with the formation of contemporary cultural identity. Furthermore, current struggles for land tenure among the Maya of southern Belize could make perceptions of ancestral material heritage particularly salient.

**Nutter, Ken [52]** see Pace, Meghan

**O'Boyle, Robert (University Of Montana), Alvin Windy Boy (Chippewa Cree Tribal Historic Preservation Office ), Anna Prentiss (University of Montana), Jessica Bush (University Of Montana) and Jonathan Eagleman (Chippewa Cree Tribal Water Resources)**

[88] *Cultural Heritage and Tribal Cultural Resource Management: Data Recovery on the Rocky Boy's Reservation of North Central Montana*  
 Between 2005 and 2008, the Chippewa Cree Tribal Water Resources Department, Chippewa Cree Tribal Historic Preservation Office, and the University of Montana conducted archaeological investigations that included the first large scale data recovery program on the Rocky Boy's Reservation. The Chippewa Cree Tribe worked closely with the University to evaluate and excavate several prehistoric sites dating 5500 to 500 B.P. Information from the archaeological excavations and other cultural resource management efforts are being utilized in a variety of contexts including local schools.

**O'Brien, Christopher [145]** see Foutch, Amy

**O'Brien, Michael [44]** see Van Pool, Todd L.

**Ochoa-Winemiller, Virginia (AUM) [117]** *Second Organizer*; [117] see Winemiller, Terance

**Odegaard, Nancy [71]** see Cassman, Vicki

**Ogburn, Dennis (University of North Carolina at Charlotte)**

[191] *Inca Obsidian Procurement on the Northern Frontier*  
 Recent sourcing data from obsidian artifacts recovered from Inca fortresses in the northern reaches of the empire has been examined to understand imperial strategies for provisioning soldiers stationed in military outposts. The dataset includes samples from the Pambamarca forts to the east-northeast of Quito, which were occupied during the Inca campaign to conquer the

Cayambes, and the fortress of Rumicucho, which lies to the north of Quito and was likely occupied earlier and for a longer period than the Pambamarca forts. The presence of obsidian in Rumicucho is also analyzed for its potential to serve as a time marker.

**O'Hara, Michael (Arizona State University)**

[18] *Metaphor, Material Culture, Ritual, and Community Formation: Conus Shell Tinklers in the American Southwest*

Symbolic associations exist in Hopi cosmology among rain, shell, and pronghorn. The formalization of these associations into a rain-making sodality may be archaeologically identifiable through Conus shell tinklers, which initially appear at late Chacoan sites like Aztec. Tinklers were included in the formal ritual costume of the Magician, who was buried ca. A.D. 1175 in the cultural frontier zone of the Flagstaff region. Tinkler use subsequently spread to 13th-century multiethnic coalescent communities along the Mogollon Rim and in the Tonto Basin. This and other data suggest the emergence of social ideals of distributive power among sodalities that controlled complementary rituals.

**O'Hear, John**

[17] *A Reconsideration of the Mississippian Component at the Tibbee Creek Site: Farmstead or Temple?*

The Tibbee Creek site in east Mississippi, has been considered since its excavation in the 1970's as a classic example of a small Mississippian Farmstead. Recently, however, comparison to similar structures at the Lubdub Creek, Fatherland and Hiwassee Island sites suggests strongly that the main structure has a distinctive form usually associated with mounds, temples and charnel structures. Viewed in this way, the unusual burial programs associated with the structure suggests one of the burials is of an elite individual while others are likely retainer burials such as documented historically with the Natchez. This paper presents this new interpretation.

**Ohnstad, Arik (Vanderbilt University)**

[119] *Ceremonial Centers in the Titicaca Basin Formative Period: New Data from Khonkho Wankane (Bolivia)*

The massively primate urban center of Tiwanaku emerged out of a landscape of small ceremonial centers scattered across the southeastern Titicaca Basin. These Formative period ceremonial sites have most often been described as loci of increased concentration of population and economic production; Tiwanaku's development is generally seen as an intensification of this process. However, data from Tiwanaku's close neighbor, Khonkho Wankane, strongly suggests that a new type of ceremonial center was developing in the latter part of the Formative period (AD 250-500). This paper summarizes these new data and suggests new avenues for understanding the Titicaca Basin Formative.

**Okilo, Idi**

[93] *Enclosed Space as a Feature of Ancient Maya Cave Utilization*

The analysis of the ancient Maya utilization of cave space is in its nascency. The first formal papers on the topic by Andrea Stone and Holley Moyes appeared only in 2005. Investigations at Midnight Terror Cave documented a purposeful selection of small enclosed spaces as the location for cave rituals. In numerous cases the enclosures were constructs and many of these were connected by constructed walkways in what appears to be a larger circuit. This presentation examines the significance of restricted space within the larger context of Maya religion.

**Okkonen, Jari [143] see Hulse, Eva L.**

**Okoye, Matthias I. [28] see Reinhard, Karl; [28] see Wall, Nicole**

**Oliver, Jose (University College London) [172] Discussant**

**Olszewski, Deborah [184] see Smith, Jennifer R.**

**Olton, Elizabeth (The University of New Mexico)**

[6] *The Role of the New Art History in Analyzing Ancient Maya Burials*

In 1976, Clemency Coggins published "A Role for the Art Historian in an Era of New Archaeology." Coggins discusses the discipline of art history as it relates to the New Archaeology of the 1970's. Similar evolutions in the field of art history occurred in the 1980's. Although these new art historical methodologies are common in much of the Western tradition, they are rarely applied to ancient Maya mortuary visual culture. This paper uses Coggins' suggestions for Maya

art history as a point of departure in exploring alternative questions for looking at meaning in elite burials and surrounding architecture.

[6] *First Chair*

**O'Mansky, Matt (Youngstown State University) and Arthur Demarest (Vanderbilt University)**

[83] *Water, Politics, and the Earliest Manifestations of the Classic Maya Collapse: A Holistic Perspective from the Western Maya Kingdoms*

The end of the Classic Maya kingdoms was a more complex phenomenon in chronological, geographic, and processual terms than recent scenarios take into account. It was an irregular termination, transition, or transformation of a specific political system, the Kukul Ajaw system, with a variable nesting of ultimate and proximate causes over a 350 year period. The most specifically documented, chronologically controlled, and earliest "collapses" of kingdoms occurred in the Pasión Valley. There the detailed evidence of a process beginning in 695 and exploding by 760 reveals the regional, interregional, and structural factors involved in the collapse in the west.

**O'Neil, Megan (University of Southern California)**

[112] *Creation and Persistence of Sacredness in Ancient Maya Sculpture*

Ancient Maya stone sculptures were made sacred when created, fundamentally transforming the stone's nature. Twentieth-century Ch'orti' Maya year-renewal ceremonies provide a fruitful analogy, for in them priests constructed a world-renewing cosmogram made of five stones. Each year new stones created the cosmogram, but the old stones were still considered sacred. Ceremonial actions thus transformed the stones, testifying to the power of human agency and the stones' ability to hold sacredness, which changed how people engaged with them. Exploration of ancient Maya sculptures over their life histories demonstrates that they too demanded special treatment, suggesting an analogous persistence of sacredness.

**O'Rourke, Laura (UC Berkeley)**

[117] *Recent excavations at Yarumela, Honduras*

Yarumela is one of the earliest village sites in Honduras. Its center has early monumental architecture and evidence of social stratification. Research during June and July of 2008 focused on investigating Early and Middle Formative households south of the village center, where previous excavations in the 1940s and in 1983 had identified early domestic contexts. The UC Berkeley/IHAH project had two primary goals for the 2008 season: to conduct broad horizontal excavations in these residential contexts in order to obtain information on the daily productive activities of the inhabitants of this early Mesoamerican village and to place this information within the context of social changes within the village and Formative Mesoamerican more broadly.

**Ortiz, Agustín (Ins. Inv. Antropológicas), Jorge Blancas (Instituto de Investigaciones Antropológicas, UNAM, México) and Luis Barba (Instituto de Investigaciones Antropológicas, UNAM, México)**

[38] *Geophysical studies in the Tlaltecuhli area at Great Temple, Mexico Tenochtitlan*

Geophysical studies were performed in the vicinity of the Tlaltecuhli monolith to look for associated offerings and chambers. Most of the studies used the georadar, but it was also possible to apply electric profiles. After the removal of the fragments of the monolith, conditions improved and it was possible to pursue better data quality. After several successive steps of study with excavation feedback, clearer reflections allowed us to define some characteristics of the buried elements and contribute to the proper design of the excavation strategy that later discovered offering chamber and some associated elements.

**Ortiz Butrón, Agustín [148] see Blancas, Jorge**

**Ortiz Ceballos, Ponciano and Christopher Pool (Kentucky university)**

[148] *La secuencia cultural de Tres Zapotes Ver. Mexico*

En 1975 se presentó una propuesta de cronología cultural para Tres Zapotes, la cual ha probado ser en términos generales vigente, sin embargo, con los trabajos recientes del Proyecto Tres Zapotes dirigido por C. Pool esta ha sido ampliada y mejor comprendida. Presentamos un resumen y se intenta una definición o caracterización temporal y espacial de los diferentes periodos de ocupación del sitio.



**Osborne, Glendee Ane (UNLV, NPS-LAME)**

[180] *Using Spatial Data Modeler for Predictive Modeling: Application on the Shivwits Plateau, NW AZ*

Utilizing the Arc Spatial Data Modeler extension for ArcMap, Archaeologists can quickly and easily produce statistically robust model results representing archaeological datasets in a visual format that is straightforward and simply interpreted. SDM software, originally used for medical diagnoses and later expanded for locating gold deposits, is a user-friendly application not widely used in archaeology today. Applied on the Shivwits Plateau in northwest Arizona, a model of site location and settlement is derived using a database of previously recorded site locations and a series of environmental variables.

**Osborne, James (Harvard University) [113] Second Chair [113] Second Organizer; [113] see VanValkenburgh, Nathaniel P.**

**Osterhoudt, Curtis [44] see Goodale, Nathan B.; [44] see Fontes, Lisa M.; [44] see Prentiss, Anna Marie**

**Ostovich, Marta (Boston University)**

[96] *Archaeological Tourism on Menorca, Spain*

This paper presents the results of a survey of tourists at the site of Torre d'en Galmes, Menorca, Spain, carried out during the summer of 2008. The goal of the survey was to determine how much of the island's active tourist industry is based on the cultural heritage of the island and whether Menorca's listing as a UNESCO Biosphere Reserve affects tourists and the choices they make. The survey also sought to determine what aspects of visiting an archaeological site attract visitors and what they find interesting about seeing archaeologists at work.

**Otarola-Castillo, Erik (Iowa State University), Benjamin Schoville (Arizona State University) and Janni Pedersen (Iowa State University)**

[70] *Are Pleistocene Engravings The Result Of Symbolic Behavior Or A Random Process?*

A significant component of the emergence of modern human behavior is the appearance and organization of symbolic expression in prehistory. Despite this centrality, identifying symbolic artifacts remains difficult and subjective. Here, we offer a statistical method grounded in semiotic theory, to identify patterns likely designed to convey symbolic meaning. We test the oldest discovered archaeological "engravings" interpreted as being symbolic: large mammal remains from Bilzingsleben in Europe, and ochre tablets from Blombos and Klein Kliphuis in South Africa. We address whether these engravings resemble patterns intended to convey information, or if they are more likely byproducts of a random process.

**Otarola-Castillo, Erik [88] see Burnett, Paul**

**Otis Charlton, Cynthia (Independent Research) and Thomas H. Charlton (The University of Iowa)**

[76] *The Malpaís Obsidian Source Area in the Basin of Mexico*

Surveys in the eastern Teotihuacan Valley have defined the extent of the Malpaís Obsidian Source Area. The obsidian varies widely in quality over the broad area of the zone and displays evidence of widespread prehispanic testing of the various extrusions but exploitation of only the better outcrops. In addition, evidence was found on extraction techniques and initial obsidian preparation. The survey was undertaken in part to attempt to locate an unknown obsidian source indicated by INAA done at MURR on obsidian artifacts found in the Aztec Otumba townsite. A light Aztec occupation was also mapped in the source area.

**Overholtzer, Lisa (Northwestern University)**

[166] *(Re)presenting Figurines and the Aztec State: Gender in the Postclassic Central Mexican Household*

This paper expands upon Elizabeth Brumfiel's influential 1996 work entitled "Figurines and the Aztec State," in which she used figurines to study changes in female ideologies associated with Aztec state formation. Taking a more inclusive approach to gender, I consider male and female figurines from the Xaltocan collection, emphasizing previously neglected male examples. By doing so, this paper sheds light on gendered household concerns and ritual practices throughout the Postclassic, and reveals the Middle Postclassic to be a period of instability and fear for both commoner men and women, more so than the oft-emphasized Late Postclassic period of Aztec rule.

Owens, Mark [29] *see Miller, Pamela K*

**Owens, Stephanie (University of Michigan) and Katie Copeland (University of Arizona)**

[31] *Developing an Exhibit on a Traditional Hopi Food for the Homol'ovi State Park, Arizona*

The "voice" that is heard in many museum exhibits is changing. In the past, exhibits were presented from the perspective of an all-knowing, disembodied curator. Recent interpretive planning and design at the Homol'ovi State Park in northeastern Arizona has emphasized the multiple voices that are important in understanding the sites of this area, which include Hopi ancestral sites. This poster portrays the processes used to include multiple voices and perspectives in the design of an exhibit on piki, a traditional and culturally important Hopi food. The design incorporates ethnographic and archaeological research and includes input from Hopi community members.

**Owoc, Mary (Mercyhurst College), Devon Perrin and Marla Greek**

[30] *Hidden in plain sight: transforming indirect evidence for perishable practices*

Preservation conditions which do not favor the survival of perishable specimens encourage investigation into indirect evidence for the construction and use of such material culture in British prehistory. Information available from mineralogical deposits and ceramic vessels is abundant, and the interwoven nature of ceramics and perishables in practice has the potential to yield important insights regarding trade, local production, social interaction, and perception both within and between communities in the British Isles. Results of recent impression research on cordage from the Middle Bronze Age Cornish settlement site of Trethellan, and earlier Bronze Age funerary sites across southwest England will be presented.

Owsley, Douglas [174] *see Burgess, Laurie E.*

**Oyuela-Caycedo, Augusto (University of Florida)**

[94] *Hot spots of diversity or the archaeological nature of human selection*

This paper discusses developmental models concerned with areas characterized as having extremely high plant and animal diversity and as being relevant for conservation. However, none of these models exposes the fact that these places have been occupied by humans for millennium. The common argument is that low densities of hunter-gatherers were insignificant in having an effect on the diversity of species associated to particular territories. It is true that we cannot talk of landscapes as anthropic modified environments, but we can pay attention to the specificity of the impact and the long-term effect of human actions on species diversity that altered the frequencies of specific populations and their consequent ripple effects. Two extreme scenarios are presented of the long term effect of humans on diversity. These scenarios can be tested with the archaeological record and can help in the recognition of human selection as a relevant force in shaping the frequency of variation of species and the structural composition of the forest in the socially constructed hot spots of the earth.

**Ozguner, Nimet Pinar (Boston University) and Nicholas Wolff (Boston University)**

[155] *Archaeologies of Scale: Approaching the Lydian Funerary Landscape through Remote Sensing and Micromorphology*

Earthen burial mounds, or tumuli, have been prominent features of the Central Lydian landscape in Western Anatolia since their construction in Lydian and Persian period. Recent survey of the royal cemetery at Bin Tepe region has incorporated the application of techniques that bridge the micro and macro scales. Here we combine stratigraphic study, micromorphological analysis, and high-platform remote sensing as a means of approaching life histories of the tumuli from the days of their construction to the modern period. This innovative collaboration reveals that mound biographies reflect complex and changing perceptions of the monumental landscape.

**Pace, Meghan and Ken Nutter (Indiana University of PA)**

[52] *Geophysical Investigations of Late Prehistoric Monongahela Sites in the Conemaugh Blacklick Watershed*

As part of the IUP Late Prehistoric project, several sites were investigated through geophysical methods. The surveys were conducted using ground penetrating radar, magnetometry, electrical resistivity, and conductivity instruments. The goal of the project was to compare the effectiveness of different methods for investigating internal site structure in both upland and buried floodplain settings. By combining geophysical surveys with excavation data, we attempted to identify certain types of features including stockade trenches and storage pits. While in some cases, the results were ambiguous, the combination of multiple approaches did successfully identify a number of anomalies in each site.

**Pagán Jiménez, Jaime [172]** *see* *Rodriguez Ramos, Reniel*

**Page, Andrew (CSU Long Beach), Carl Lipo (California State University Long Beach) and Diana Greenlee (Poverty Point Station Archaeologist)**

[53] *Variability in Thermal and Compositional Properties of Poverty Point Objects*

One of the most abundant classes of artifacts present in the Late Archaic deposit of Poverty Point, Louisiana is the shaped- and fired- clay "Poverty Point Object" (PPOs). Despite their ubiquity in Late Archaic deposits up and down the Mississippi river valley, our knowledge of their functional variability is relatively limited to anecdotal accounts related to cooking. Here, we explore variability in performance of thermal properties of varying shapes and composition of PPOs using Differential Thermal Analysis and Thermogravimetric Analysis (TGA).

**Pailes, Matthew**

[10] *Household Organization and Differentiation at Cerro Prieto, A Hohokam Cerros de Trincheras*

The transition from the Hohokam Preclassic to Early Classic (ca. AD 1150) in the Tucson Basin is characterized by large scale population movements and the appearance of specialized site types including platform mound settlements and cerros de trincheras. Cerros de trincheras are large villages constructed on low volcanic hills. Platform mounds have been extensively investigated and provide the basis for interpretations of socio-political organization during this time period. Results from survey work at a cerros de trincheras are contrasted to these models. Important distinctions are noted in organizational patterns and the degree of inequality evidenced at the household level.

**Paiz, Lorena [89]** *see* *Lohse, Jon C.*

**Palacek, Jonathan [130]** *see* *Burghardt, Lucy*

**Palmer, Ronald [143]** *see* *Parkinson, William A*

**Palumbo, Scott (University of Pittsburgh)**

[65] *The Development of Complex Society in the Volcán Barú region of Western Panama*

While previous work from the western slopes of Volcán Barú suggested that complex society may have developed sometime during the Aguas Buenas (A.D. 200-800), little information existed on the organization of activities nor the political economies associated with the development or persistence of social inequality over time. Using domestic data from Sitio Barriles and other sites in the region, this paper will examine the evidence for social differentiation and evaluate its possible connections to political organization.

**Palus, Emily (Bureau of Land Management)**

[37] *Investing in NAGPRA: Selected Case Studies in Planning and Budgeting for Compliance*

The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) introduced opportunities and challenges for Federal agencies, museums, and Indian tribes. The logistical issues and resource requirements were only generally understood at the time, with projected costs ranging from \$40 million to over \$100 million. Eighteen years of implementation shows significant variation in the complexity of projects, with an array of approaches and range of costs to support compliance efforts. This paper reviews recent approaches and resources utilized to comply with NAGPRA. Analysis of this data may be used to effectively plan and budget for NAGPRA-related activities.

**Panich, Lee (University of California Berkeley)**

[47] *Spanish Missions in the Indigenous Landscape: A Case Study from Santa Catalina, Baja California*

Mission Santa Catalina was founded on the margins of the Spanish colonial frontier in northern Baja California, but it was—and continues to be—an important place in the indigenous landscape of the region. Santa Catalina was established at a crossroads of native interaction, and recent archaeological, archival, and ethnographic research suggests that indigenous mission neophytes continued to engage in dynamic social and economic relationships with other native groups throughout the colonial period. This paper will examine native life at the mission, with a particular focus on how indigenous identity and cultural practices were both modified and perpetuated.

**Papalas, Christopher and Alexandru Szentmiklosi (Muzeul Banatului Timisoara)**

[74] *Accidental Alloying and the Early Bronze Age of the Eastern Carpathian Basin*  
Discussions of Early Bronze Age metalwork have often interpreted the use of copper alloys as intentional. However, recent work with copper ores from the Eastern Carpathians has demonstrated that some deposits contain significant quantities of arsenic or tin. These ores would produce a natural alloy when smelted. A local tin source in the Eastern Carpathians has important implications for the reconstruction of exchange networks and technological change. Given the low arsenic and tin contents of most Early Bronze Age metal artifacts, an unintentional model for early alloying may be more realistic. Differences between metals would have been readily observable to early smiths and may have provided the impetus towards the development of intentional alloying.

**Paris, Elizabeth (University at Albany-SUNY)**

[102] *Lithic Tool Production and Exchange at Moxviquil, Chiapas, Mexico.*  
During the Late Classic and Early Postclassic periods, residents of the small hilltop site of Moxviquil developed a highly distinctive lithic industry. New analyses performed on the collection housed at the Museo Na Bolom suggest that lithic tool production at Moxviquil was centered around two distinctive sub-industries: the production of chert projectile points and blades from predominantly local chert sources, and the production of obsidian blades from imported obsidian prismatic blade cores. This suggests that through the production of lithic tools at Moxviquil, its residents became important participants in local, regional, and interregional trade networks.

**Parker, Bradley (University of Utah)**

[113] *Geographies of Power: Neo-Assyrian Imperialism in Theoretical Perspective*  
This paper combines archaeological and textual data from the Mesopotamian Iron Age in order to reconstruct the mechanics of Assyrian expansion into southeastern Anatolia between 1000 and 600 B.C. I argue that Assyrian imperial expansion was not a process of conquering contiguous areas, creating an empire in which clear lines could be drawn between regions under Assyrian control and those that were not. Instead, the process of Assyrian imperialism was one in which "islands" of territorial control were planted in peripheral zones. These islands were linked to the imperial core by a network of communication and transportation corridors forming an empire made up of provinces in which the Assyrians held complete territorial control, vassal states in which the Assyrians held varying degrees of indirect control, and buffer states and zones where the Assyrians had no control.

**Parker, Kathryn [53] see Belknap, Lori****Parker-Mann, Eunice (Howard University) and Eunice Parker-Mann (Howard University)**

[33] *Fidelity vs. Serendipity in Archaeological Excavation Methods*  
In the ghost town of Hermosa, one focus of investigations was the old hotel-the only original building remaining. To learn more about Hermosa's former citizens, we surveyed a dump site east of the hotel using different methods, including metal detecting and shovel testing. Metal detecting yielded many artifacts because its frequency either detects metal substances or it does not. On the other hand, shovel testing, while systematically sampling the hidden universe, relies to some extent on serendipity in locating artifacts, which are often only found in screening. This poster compares and contrasts the effectiveness of metal detecting versus shovel pit testing.

**Parker-Mann, Eunice [33] see Parker-Mann, Eunice****Parkinson, William (The Field Museum), Bradley Carlock (Mississippi State University), Evan Peacock (Mississippi State University), Ronald Palmer (Mississippi State University) and Yunju Xia (Mississippi State University)**

[143] *LA-ICP-MS on Ceramic Incrustation Indicates Long-Term Cultural Continuity in the Prehistoric Carpathian Basin*  
One of the hottest debates in European prehistory centers on whether so-called Kurgan groups migrated into the Carpathian Basin from the south Russian Steppes sometime before the beginning of the Bronze Age. Our results of LA-ICP-MS on samples of white incrustation that was used to decorate Copper Age vessels indicate that crushed bone, not snail shell, was used to create the decorative paste. A recent study of incrustated pottery from the Bronze Age in Transdanubia also identified the use of crushed bone in the creation of the paste, suggesting continuity in ceramic traditions before and after the Kurgan 'invasion.'

**Parsons, Alexandra [53] see Parsons, Timothy A.**

**Parsons, Jeffrey (University of Michigan) [166] Discussant**

**Parsons, Timothy (Florida State University) and Alexandra Parsons (Florida State University)**

[53] *Building a Cultural Landscape: Investigation of a 19th Century Farmstead in Loudoun County, VA*

The Blue Ridge Center for Environmental Stewardship strives to use its 1000 acre historical landscape as both a research and educational opportunity. In the summer of 2007, the investigation of an early 19th century farmstead on the slope of the Blue Ridge Mountains near Harper's Ferry, WV, brought together a team of academics, interns, volunteers, and local residents. Although initially thought to be a Civil War fortification, our investigation suggests that the site was an agricultural home-site, or may have been involved in the charcoaling operations feeding the army at Harper's Ferry in the decades preceding the Civil War.

**Pasacreta, Laura [41] see Gardner, A. Dudley**

**Pascal, Camila [38] see Pereira, Gregory**

**Patch, Shawn (New South Associates, Inc.)**

[53] *Ground Penetrating Radar in Compliance Settings: Two Examples from the Southeast and Mid-Atlantic Regions*

Ground penetrating radar (GPR) is a geophysical technique frequently used by archaeologists to address a wide range of problems. This presentation discusses the results of two GPR projects conducted in Alabama and Maryland, with primary emphasis on the identification of numerous sub-surface anomalies. In both cases, subsequent excavations revealed excellent correlation between the GPR anomalies and archaeological features. The major outcome of these studies is the accuracy, reliability, and efficiency of GPR for target identification in a compliance setting.

**Patel, Ajita (Harvard University)**

[39] *South Asian Contributions to Animal Domestication and Pastoralism: Bones, Genes, and Archaeology*

Archaeological, zooarchaeological, and genetic research shows that South Asia was a significant player in bovid domestication and development of pastoralism. This paper contextualizes these processes in northwestern South Asia from early Holocene into second millennium calBC. Recent mtDNA analysis of modern cattle, water buffalo, goat, and sheep indicate that wild forms of this region contributed in differing degrees to the domestic genomes. Faunal evidence supports these indications and suggests multiple domestication events for cattle and water buffalo in South Asia. The spread of these domestic forms into China underlines the importance of South Asia in the development of pastoral practices.

**Patel, Shankari [68] see Blackmore, Chelsea**

**Pateman, Michael P. [67] see Carr, Robert**

**Pauketat, Timothy (University of Illinois) [23] see Kruchten, Jeffery D.; [112] Discussant [87] Discussant**

**Pavao-Zuckerman, Barnet (University of Arizona) and Deanna Grimstead (University of Arizona)**

[189] *Landscapes, Livestock, and Land-Use Practices at 18th-Century Pimería Alta Missions*  
Carbon and oxygen isotope assays of cattle and caprine teeth from two 18th-century Spanish missions in northern Sonora and southern Arizona may shed light on historic water management and forage regimes.  $\delta^{18}\text{O}$  values indicate that Mission San Agustín (Arizona) cattle consumed evaporated water, consistent with stock ponds or irrigation fields, while Mission Cocóspera (Sonora) livestock consumed a combination of fresh and evaporative water. Both missions indicate livestock forage was heavily influenced by C4 plants (annual desert grasses, maize, and/or succulents). These results provide a first glimpse into historic Pimería Alta livestock management practices via stable isotopes.

**Pawn, Ian (Florida State University) and Annalee Shum (Florida State University)**

[130] *Changes in Burial Treatment on the Great Hungarian Plain (5000-4000 BC)*

This poster examines changes in mortuary treatment beginning in the Late Neolithic through the

Middle Copper Age (5000-4000 BC) on the Great Hungarian Plain. The sites examined are Csöszhalom, Vésztő Mágor, Tiszapolgár-Basatanya, and Gyula 114 (n=320). Variables examined include body positioning, grave goods, and spatial patterning of cemeteries or burial areas. These data indicate homogenization of burial treatment through this period, with burial treatment becoming increasingly consistent in cemeteries across the plain. The formalization of burial treatment appears consistent with social homogenization from the Tisza-Herpály-Csoszhalom culture complex of the Late Neolithic to the Bodrogkeresztúr culture of the Middle Copper Age.

**Paye, Sandra [12]** *see Augustine, Jonah*

**Peacock, Evan [143]** *see Parkinson, William A*

**Pecci, Alessandra (University of Siena)**

[175] *Archaeological prospection at La Castellina (Central Italy). Chemical analysis of surface samples*

The survey of the area surrounding Scarlino (Central Italy), carried out by the Medieval Area of the University of Siena, permitted to identify a surface concentration of archaeological materials at La Castellina, in correspondence to three concentric rings that were visible from aerial photography. The site was therefore selected for further investigation. Archaeological prospection was carried out with geophysical and chemical techniques. The chemical prospection allowed to recognize patterns in the occupation of the site, showing major concentrations of compounds in the centre of the site. The data were also integrated with the results obtained with the geophysics prospection.

**Pedersen, Janni [70]** *see Otarola-Castillo, Erik*

**Pederson Weinberger, Jennifer [152]** *see Brady, Kathleen*

**Pedler, David (Mercyhurst Archaeological Institute), Alexis Dzubak (Mercyhurst Archaeological Institute), Allen Quinn (Mercyhurst Archaeological Institute) and J. Michael Campbell (Mercyhurst Archaeological Institute)**

[53] *Spatial Analysis of Faunal Remains from 36WH22, a Scarem Phase Monongahela Village in Washington County, Pennsylvania*

The Scarem-Kramer site (36WH22) is a late fifteenth to early sixteenth century Scarem phase Monongahela village overlooking Raccoon Creek in Washington County, Pennsylvania. The 2005 field investigation involved shallow plowing and disking of the site followed by surface reconnaissance and mapping of exposed artifacts, faunal remains, and cultural features via electronic total station. Prior analyses (reported in 2008) identified as many nine discrete clusters of cultural material on the ground surface of the site. The present analysis focuses on the species composition of and spatial relationships between the 3,100 bone and shell specimens identified in the site's 10,000-piece assemblage.

**Pedro, Marielle**

[29] *Grave Marker Style Distribution: A Comparison Between Urban and Rural Cemeteries Using GIS*

Is the spatial or temporal pattern within or between two cemeteries, one rural, one urban, statistically significant? By conducting a survey of two cemeteries in Washington State, one in an urban setting and one in a rural setting, it is my intention to show the similarities and differences between the spatial and temporal patterns of grave marker styles. I will explore possible historical explanations for observed patterns and the effectiveness of a GIS in inferring these explanations.

**Peebles, Christopher [17]** *Discussant*; [17] *see Kus, Susan M.*; [17] *see Monaghan, George William*; [42] *Discussant*

**Peeples, Matthew (Arizona State University)**

[61] *Alternatives to ethnic models of regional scale social organization*

In recent years, archaeologists have replaced static concepts of ethnic groups as archaeological cultures with more nuanced perspectives on the extremely fluid and situational nature of ethnic identities. Debates over the specific relationships among culture, interaction, ethnicity, and material culture, however, suggest that archaeologists are still struggling with how ethnic identities can fluctuate while maintaining certain regularities. Using examples from the U.S. Southwest and Medieval Europe, I argue that alternative models of collective identity at broad social scales developed by political identity theorists provide new insights into the processes involved in the development of regional scales of social organization.

**Peixoto, Silvia (PEIXOTO, S.A.)**

[85] *Formation processes of the small-size shellmounds located at the southern coast of Brasil*  
The occupation of the Brazilian coast by groups of fisher-gatherers has been a topic of research since the inception of Brazilian Archaeology. The large shellmounds of the southern coast of Brasil have played a significant role within this context, as they have drawn the undivided attention of researchers. Insofar as the occupation dynamics of the region will only be understood as long as the existence of the small-size shellmounds is taken into account, this study is geared to an assessment of the different processes that comprised some minute sites located in the southern coast of the State of Santa Catarina.

**Peixoto, Silvia [139]** *see* *Mandarino, Marcelle Costa*

**Peles, Ashley [18]** *see* *Trigg, Heather B.*

**Penders, Thomas (United S), Lori Collins (University of South Florida) and Travis Doering (University of South Florida)**

[174] *High Definition Digital Documentation of the Beehive Blockhouses, Launch Complex 31/32, Cape Canaveral Air Force Station, Brevard County, Florida*

Two unique "beehive" blockhouses were built to house the control facilities for the testing and launching of the Minuteman Missile Program conducted from 1961 to 1970. As the U.S. missile and space programs evolved, so did their launch facilities. These bunker-like structures were located only 400 feet from the missile silos, and are the only extant examples of this type of construction. High Definition Digital Documentation (H3D), which uses the "best available technologies," was implemented to document, and model these structures. Three-dimensional laser scanners provided extremely accurate and robust data sets for multiple cultural heritage preservation applications.

**Peniche May, Nancy (UCSD)**

[192] *A Political Administrative Seat During The Middle Preclassic Period: The Case Of Xaman Susula*

This paper discusses the preliminary results of material evidence analysis recovered from explorations at Xaman Susula, an archaeological site located in Yucatan. Ceramic analysis has allowed to determine its occupation began during the Middle Pre-classic period and continued until the Early Classic period. Even more, we can suggest on the basis of artifactual and architectonic data that Xaman Susula served as the political-administrative seat of dispersed neighboring hamlets since Pre-classic times. Thus, explorations on this site help us to increase our understanding of pre-classic sites, especially in political aspects; corroborating Yucatan was an important region for Maya Pre-classic culture development.

**Pepe, James (Janus Research), Adam M. Schieffer (Janus Research), Clifford M. Jenks (Janus Research), Diane Kloetzer (Janus Research) and James P. Pepe (Janus Research)**

[90] *Lakeside Ranch: A Glimpse at Early Settlement along Lake Okeechobee*

As part of ongoing archaeological research associated with the Comprehensive Everglades Restoration Project (CERP), Janus Research has been conducting investigations at Lakeside Ranch along the eastern edge of Lake Okeechobee. Work here has resulted in the documentation of at least seven precolumbian sites located on former shorelines and other topographic rises. Analysis indicates use of this area at least as early as the ceramic Late Archaic. These sites seem to have been largely abandoned about or before 1,000 years ago. Lakeside Ranch provides an interesting glimpse into the early history of Lake Okeechobee and adaptation to interior southern Florida.

**Pepe, James P. [90]** *see* *Pepe, James P.*

**Pereira, Carlos (CMRM-SMPHAC), Alice Wright (University of Michigan), Carolyn Conklin (Wake Forest University) and Paul Thacker (Wake Forest University)**

[130] *Late Prehistoric Economy, Organization, and Interaction at Castro de Sao Martinho, Portugal*

This poster reports the results of four seasons of archaeological fieldwork at the Late Bronze Age and Early Iron Age hillfort of Sao Martinho in central Portugal. High precision surface mapping techniques coupled with an extensive ground penetrating radar survey oriented a test excavation strategy designed to locate stratified Late Prehistoric cultural deposits minimally-disturbed by

recent agricultural landuse. Preliminary assemblage analyses and initial architectural observations indicate decreasing intrasite complexity across the Bronze/Iron Age transition. Sao Martinho is thus an important site for understanding local dynamics within Iron Age social evolution, the settlement's reversion standing in significant contrast to broader regional patterns of increasing economic specialization and social complexity.

**Pereira, Gregory, Ángel González López (ENAH), Camila Pascal (ENAH), José María García (ENAH) and Julie Kay Wesp (University of California, Berkeley)**

[38] *A Sequence of Ritual Activities under the Tlaltecuhlli monolith*

The stratigraphic excavations conducted underneath the Earth Goddess Tlaltecuhlli monolith have resulted in the reconstruction of a complex sequence of ritual activities that occurred before placing the monument. The sculpture was intentionally placed on top of a wide pit, in which a group of four important offerings were situated. The symbolism of these deposits are closely related with the earth goddess and with the entrance located to the West of the monolith. Finally, we noticed that this pit includes earlier elements that lead to new data about the use of this space, located at the foot of the Templo Mayor.

[38] *Second Organizer*

**Pereira, Karen (University of Florida)**

[36] *The Past is not written in Stone: Preclassic Plain Stone Monuments in the Highlands of Guatemala*

Stone monuments in Southeastern Mesoamerica are considered one of the landmarks of social complexity during the Preclassic period. Nonetheless most of the studies have focused on the carved and decorated surfaces of the stone monuments which have left plain stone monuments underinvestigated. Middle and Late Preclassic plain stone monuments have been documented mostly in the Highlands of Guatemala, and along the Pacific Coast of Chiapas, Guatemala, and El Salvador. This paper discusses new evidence of Middle Preclassic plain stone monuments in the Highlands of Guatemala found at Naranjo in Guatemala City. Recent research at the site of Naranjo has documented more than 20 plain stone monuments in situ which makes it an interesting case to discuss the relationship of plain stone monuments and the emergence of social complexity during the Preclassic period.

**Peres, Tanya (Middle Tenn State Univ)**

[148] *Fishing and Hunting for the Family Larder: Olmec and epi-Olmec Subsistence Strategies at Tres Zapotes*

The PATZ excavations yielded a sizeable faunal assemblage from the Olmec and epi-Olmec site of Tres Zapotes. The analysis of this assemblage includes both diachronic changes in animal use as well as socio-political differences in the animal use at Tres Zapotes. Both aquatic and terrestrial animals were important dietary staples throughout the Formative. However, certain terrestrial taxa appear to have played greater roles in the diets of elites while domestic contexts yielded larger quantities of aquatic animals. The zooarchaeological data from Tres Zapotes are an important contribution to our understanding of Olmec and epi-Olmec subsistence strategies.

[56] *see Schober, Theresa M.*

**Perez Rodriguez, Veronica (Northern Arizona University)**

[27] *Highland urbanism at Cerro Jazmin: investigating urban strategies and their environmental impact*

This paper discusses the findings of an archaeological project that focuses on Cerro Jazmin. Cerro Jazmin is a Prehispanic urban center that was intermittently inhabited from the Terminal Preclassic to the Postclassic in the Mixteca Alta, Oaxaca. Project results are presented in relation to broader theoretical and comparative discussions that speak to issues of urban layout and function, urbanism strategies, settlement longevity, and environmental impact. The study especially investigates the integration of green and agricultural spaces and terraces within the urban layout.

[27] *First Chair*

**Perez Winter, Cecilia, Laura Salgan (Centro Regional de Investigación y Desarrollo Cultural, Malargüe, Argentina) and Raven Carper (University of California, Davis)**

[91] *Toward a better understanding of the distribution and use of lithic resources in southern Mendoza province, Argentina.*

In southern Mendoza Province, Argentina, obsidians and their sources have become subjects of intensive study in recent years. Mapping the geographic locations and geochemical signatures of obsidians can lead to important discussions of prehistoric behaviors as well as appropriate



protection measures for the sources themselves. It is clear from the archaeological record of the region, however, that obsidian did not become the most commonly used material until the late Holocene and considering other materials using the framework developed for obsidian is paramount to understanding Mendoza prehistory. Here, we discuss recent methodological and theoretical approaches to mapping and interpreting the stone sources of southern Mendoza.

**Perez-Juez, Amalia (Boston University)**

[135] *Teaching Human Evolution to Kids and Teenagers. Examples from Atapuerca - Spain*  
Human evolution is not an easy topic to explain: never-ending chronologies, abstract concepts, species that appear and disappear, and moral or religious biases. Moreover, the global controversy between Human Evolution and Intelligence Design makes the topic a difficult one to teach as it becomes crucial to prepare new generations about the importance of science. The paleoanthropological sites of Atapuerca, Spain, have provided fossils of hominins from the past million-plus years, shedding light over the complex theories about the arrival of humans to Eurasia and the connections between modern and ancient hominins. The purpose of my paper is to present the programs to teach this information to kids and teenagers that I have implemented at Atapuerca for the past five years. The programs approach the topic from various disciplines, and emphasize the scientific explanation of Human Evolution.

**Perrin, Devon [30]** *see Owoc, Mary Ann*

**Perring, Dominic (University College London) [7]** *Discussant*

**Perry, Christina (Barnard College), Jeffrey Spear (Columbia University) and Lindsay Montgomery (Columbia University)**

[18] *Cultural Landscape in the Rio Grande Gorge*  
The Rio Grande Gorge has long been an economic resource for native groups of the Southwest, but its symbolic role has remained more elusive. An ongoing survey of the gorge in the Taos district has begun to record traces of human usage from the Archaic to the present day; the project aims to establish how this striking geographic feature has been conceived as part of the greater cultural landscape. This presentation reports on material from the survey, including lithic tools and rock art, putting them in the context of variations in belief and practice across time periods and ethnic boundaries.

**Perry, Jennifer (Pomona College)**

[85] *Island Interiors and Coastal Interfaces on the California Channel Islands*  
Given their small size and limited terrestrial productivity, the focus of archaeological inquiry on the California Channel Islands has been on coastal sites and marine resources. However, the largest, Santa Cruz Island, stands apart because of its interior valley, where there are abundant plants, freshwater, and other resources. Excavations at four sites in the Central Valley suggest that it was important to islanders during the Middle and Late Holocene, its resources outweighing the costs of transporting marine foods and supplies inland. Occupied for a wide variety of purposes, its significance exceeded that of simply supplementing marine resources.

**Perry, Lauren [88]** *see DuBarton, Anne*

**Perry, Linda [170]** *see Cervantes, Gabriela*

**Persons, A. Brooke (University of Alabama), Roberto Valcárcel Rojas (Departamento de Arqueología de Holguín, CISAT, CITMA, Holguín, Cuba) and Vernon James Knight (University of Alabama)**

[150] *Site Characterization at El Chorro de Maíta, Cuba: Results of the 2008 U.S.-Cuban Expedition*  
The late-period site of El Chorro de Maíta in eastern Cuba consists of a central cemetery surrounded by a large occupational zone. Our previous work established the site boundaries, identified areas of concentration, and characterized the residential areas surrounding the cemetery. In our 2008 field season, we conducted extensive excavations in three previously identified residential areas and incorporated an ethnobotanical research focus. Formal excavations revealed differentiated residential deposits and evidence of the production of skillfully crafted goods in one locale. Specific excavated contexts include a dense midden, a surface hearth, postholes, and numerous features.

**Persons, A. Brooke [5]** *see Noe, Paul D.*

**Pestle, William (Univ. of Illinois Chicago)**

[150] *Paleodiet and socio-political change in prehistoric Puerto Rico*

Food informs, and is informed by, a variety of social, economic, religious, historical, ecological, cultural, and political processes. Paleodietary patterns and change can thus serve as a proxy for the political, social, and cultural dynamics of past societies. Stable isotope analysis is capable of providing dietary insights at such a scale and of such a resolution as to illuminate precisely such processes. In this light, the results of an ongoing isotopic study of paleodiet at four pre-historic Puerto Rican sites are presented, with the elucidation of socio-political structures and strategies of pre-Columbian Puerto Rico as the ultimate goal.

[150] *see* Curet, L. A.

**Petraglia, Michael [188]** *see* Cunningham, Kevin

**Pettersson, Mattias [85]** *see* Wikell, Roger

**Pettigrew, Richard (Archaeolog. Legacy Inst.)**

[188] *The Archaeology Channel: A Real World Teaching Tool*

Developing the very popular streaming-media Web site, The Archaeology Channel, is an unprecedented opportunity to reach many audiences in a compelling way, but also has posed significant challenges of coordinating with the diverse archaeological community. Through the use of streaming media, TAC has captured a huge general audience and is growing in all respects, but its potential as yet is far from realized. The professional community has used and reacted to TAC in very diverse ways that reflect the ideals, practices and biases of archaeologists.

[103] *Discussant*

**Peuramaki-Brown, Meaghan [185]** *see* Hoggarth, Julie A.

**Pevarnik, George (Temple University)**

[110] *Not Everything that Glitters is Gold and not Every Whitish Aplastic is Quartz: Theoretical and Methodological Implications for Pottery Analyses and Interpretations*

The mineralogical identification of pottery temper/aplastics is fundamental for providing accurate insight into the past. Consequently, errors identifying pottery aplastics can adversely influence interpretations of prehistoric behavior regardless of a researcher's theoretical orientation. The results of a petrographic analysis of late Middle Woodland (ca. A.D. 200-900) pottery from the Delaware Valley and coastal New Jersey suggest that 1) macroscopic methods of aplastic identification are in some cases inadequate; and 2) the lack of an explicit theoretical program recognizing the fundamental differences in social, economic, and production organization between sedentary and semi-sedentary/mobile pottery producers confounds interpretations of prehistoric behavior.

**Phillips, Rebecca (University of Auckland)**

[145] *Mobility in the Egyptian Neolithic*

Archaeological evidence indicates the Egyptian environment did not support a Neolithic sedentary village-based economy. It is assumed that Saharan occupation was relatively mobile and Nile Valley occupation was more sedentary but direct measures of the degree of mobility have until recently been lacking. This study uses a new technique to quantify artifact presence and absence as a proxy for human movement. Mobility is compared between in two distinct environmental regions dating to the mid-Holocene. Differences in the degree to which artifacts moved out of these regions are used to discuss the degree of mobility evidenced in these locations.

**Phillips, David (Maxwell Museum of Anthropology)**

[13] *The Northern Sierra Polychrome Tradition*

A polychrome tradition centered in the northern Sierra Madre Occidental of Mexico has implications for our understanding of polychrome styles and technology in the U.S. Southwest, including in the Rio Grande area. Unfortunately, the Northern Sierra polychrome tradition is still poorly understood and has been mostly ignored by those working in similar and possibly related ceramic traditions in the U.S.

**Phillips, Erin (University of Alabama)**

[42] *Hemphill Style Engraved Pottery*

The Hemphill style (ca. AD 1300-1500) is a representational art style at Moundville. It includes

such themes as winged serpents, crested birds, raptors, center symbols and bands, and trophies. While the style is found on engraved and incised pottery, stone discs, stone pendants, and copper gorgets, this study focuses on the engraved pottery. It is possible to create a seriation based on the 147 whole vessels excavated in the first half of the 20th century as well as sherds with dated contexts from more recent excavations. Preliminary analyses show that the stylistic diversity of Hemphill-style engraved pottery changes through time.

**Phillips, Laura S. [179]** see Vargo, Barbara A.

**Phillips, Sara (Tulane University)**

[15] *Histories of Violence: Fracture Patterns in the Sacrificial Victims from Plazas 3A and 3C, Huaca de la Luna*

As this symposium demonstrates, the subject of Moche warfare remains one of great interest. One area of evidence that has, heretofore, been underutilized in the study of Moche warfare is analysis of the fracture patterns in the skeletons of the Moche themselves. To examine the role of interpersonal violence in the lives of Moche individuals, an analysis of pattern of bone fractures was undertaken for the sacrificial victims from Huaca de la Luna. This analysis revealed that interpersonal violence was indeed a factor in the lives of several sacrificed individuals, both at the time of their death and before.

**Phillips, Scott (SWCA), Matthew Bandy (SWCA), Michael Cregger (SWCA), Paul Burnett (SWCA) and Scott C. Phillips (SWCA)**

[34] *Trends in Site Distributions at Interfaces between Mountains and Basins and Cultures on the Northeast Colorado Plateau*

As the design and holdings of digital databases improve, so does capability for robust wide-area analysis of archaeological site distribution. Using regional databases and recent field survey results from vast northeast Colorado Plateau areas and bordering mountain and interior basin interfaces, we have been able to better consider occupations and affiliations through material culture and within cultural chronologies in Colorado's Piceance Basin. Our presentation explores trends within persisting, or "late," Archaic hunting traditions where they overlap with Formative horticulture among diverse groups within and through time, from ancestral Ute and Fremont to influences from Southwestern Puebloan and Great Plains cultures.

**Phillips, Scott C. [34]** see Phillips, Scott C.

**Phillips, Shaun (Statistical Research, Inc), Phillip Leckman (Statistical Research, Inc) and Timothy Church (Lone Mountain Archaeological Services)**

[40] *Wandering the Desert: Least-Costs Path Modeling for Water Transport Trails in the Jornada* Previous researchers have located three possible trails on Northern Fort Bliss, Otero County, New Mexico. These have been interpreted as trails for transporting water from a semi-permanent water source to other locations. This paper will attempt to look more rigorously at the placement of these trails on the landscape. Using the originally identified water source as a starting point, other possible trail locations will be evaluated based on survey data and least-cost analysis.

**Phillips, Shaun [75]** see Leckman, Phillip O.

**Picha, Paul (State Hist Soc of North Dakota)**

[29] *Experimental Replication and Functional Analyses of Pointed and Beveled Freshwater Mussel Shell Scrapers from the Heart River Region, North Dakota*

Will and Spinden (1906:167) reported on the pointed and beveled freshwater mussel shell scraper tool class from Middle Missouri villages in their classic monograph *The Mandans*. Valves of the common fat mucket mussel, *Lampsilis siliquoidea*, served as stock material to fashion these tools. Experimental replication efforts indicate these shell tools are produced using score-and-snap technology for controlled fracture and finished by grinding. Functional analyses also support their interpretation as modeling implements and decorative styli in the Terminal Middle Missouri tradition potters' toolkits from 32MO11 and 32BL3.

**Pietak, Lynn (Edwards-Pitman Environ.)**

[80] *Early Mississippian Architecture and Site Organization at 9CK1*

The floodplain of the Etowah River at 9CK1 contained numerous structural elements associated with the Early Mississippian occupation that provide a significant contribution to our knowledge of this period in the region. Prior to this excavation project, little was known about Early Mississippian architecture in northern Georgia and comparative data was drawn from sites in

Tennessee or Alabama. This paper will describe the forms of architecture present at the site and situate the structure style within a regional context. In addition, information regarding the lay-out of this portion of a Late Etowah village will be discussed as well as the ramifications of the palisade wall for relationships with other Etowah Valley sites.

[80] *First Chair*

**Pillsbury, Joanne (Dumbarton Oaks) [170] *Discussant***

**Pinhasi, Ron [50] *see Areshian, Gregory E.***

**Pinney, Donald [88] *see Kennerty, Michael R.***

**Pinson, Ariane (University of New Mexico)**

[189] *Intrasite Geoarchaeological Bias in Demographic Estimates for Adobe Pueblos*

Seriation of surface ceramics is a common technique for unraveling demographic histories of prehistoric Puebloan sites in the Southwestern U.S. However, site formation processes within these sites exert a systematic bias in demographic estimates of founding populations. When repeated across multiple sites, it biases our understanding of the process of aggregation at the scale of region. Geoarchaeological data from the protohistoric period pueblo of San Marcos (LA 98) are used to explore these issues.

[189] *First Chair*

**Pitezel, Todd (University of Arizona)**

[10] *Pilgrimage to Cerro de Moctezuma, Chihuahua, Mexico*

The Casas Grandes ritual landscape encompassed a vast area with constructed and conceptual points of reference. Nested squarely within that landscape was Cerro de Moctezuma, a hill settlement to which people from the surrounding valleys journeyed and convened for religious observances. Trails to the hill served to orient a sense of community and purpose along the journey and foreground events both at Cerro de Moctezuma and at home, while architecture, defined social spaces, and the summit ritual precinct contextualized those events. Original and comparative data are used to support the claim that Cerro de Moctezuma was a pilgrimage destination.

**Plane, Mark (UNC-Chapel Hill)**

[14] *The Archaeology of Catawba Itinerancy*

Between 1760 and the 1820s, Catawba Indians in South Carolina leased reservation land to Anglo-American settlers and worked as itinerant potters and slave catchers, traveling seasonally from their backcountry home to the seaboard. This paper provides anthropological analysis on this phenomenon, examining the economics of itinerancy; the Catawba's relationships with their host society, especially their use of patron-client relationships to maintain their land base; and the "adaptive" aspects of their itinerant identity. Archaeological perspectives on Catawba itinerancy include the impact of itinerancy on architecture and site construction, diet, and material culture, particularly material remains related to mobility and identity construction.

**Plis, Laura (Purdue University) and Donna Glowacki (University of Notre Dame)**

[18] *PIXE Analysis of Paint and Slip on Mesa Verde Black-on-white Bowls from Aztec Ruin, New Mexico*

Particle Induced X-ray Emission Spectroscopy (PIXE) was used to analyze Mesa Verde Black-on-white bowls from Aztec West in New Mexico. Here, we present preliminary results from the first phase of a pilot project to analyze the composition of both slip and paint from 26 bowls. Using K-means cluster analysis and tertiary plots, we identified at least two, possibly three, slip recipes and a greater variation in paint recipes than apparent in the slips. We anticipate performing additional PIXE analysis on these sherds to improve our results by taking multiple shots to capture the range of compositional variation within each bowl.

**Plog, Stephen (University of Virginia)**

[66] *Chaco Demography: A Reexamination*

Over the last two decades, estimates of the number of people living in Chaco Canyon as a whole and in individual great houses have declined markedly. Scholars now commonly argue that great houses had small resident populations and that overall population levels in the Canyon also were low. I reexamine the basis for these decreasing estimates using historical documents collected by the Chaco Digital Initiative as well as data on individual rooms from sites such as Pueblo Bonito.

[66] *First Chair* [66] *Second Organizer*

**Pluciennik, Mark (University of Leicester) [137] *Discussant***

**Pluckhahn, Thomas (University South Florida)**

[161] *Cooperation and Competition Among Late Woodland Households at Kolomoki (9ER1)*

Recent excavations at Kolomoki (9ER1), in the Chattahoochee River Valley of southwestern Georgia, reveal fundamental changes in the households over the course of the Late Woodland period, between approximately 600 and 800 A.D. In the early Late Woodland, houses were small and included minimal storage. Ceramic assemblages show limited diversity and few non-local types. In the later Late Woodland, these trends were reversed; houses became larger, storage facilities increased in size and abundance, and the ceramic assemblages became more diverse. I relate these changes to a breakdown of social institutions that encouraged cooperation among households.

**Plumlee, R. Scott (Statistical Research Inc.), Ashley Morton (Statistical Research Inc.), Callie Unverzagt (Statistical Research Inc.) and Shari Tiedens (Statistical Research Inc.)**

[43] *The Paper and the Privy: Juxtaposing Historical and Archaeological Models of Socio-economic Status*

The availability of written records pertaining to households in late-19th and early-20th century Tucson, Arizona, allows for historical modelling of their socio-economic status. However, these models should augment, rather than replace, models based on material culture. To develop a greater understanding of these households, the results of an archival-based historical model were compared to three archaeological models. The latter were based on materials collected from privy contexts during excavations for the Joint Courts Complex project. The comparison allows for an assessment of the individual models and an examination of socio-economic status in a late 19th- and early 20th-century Tucson community.

**Plumlee, Scott [18] see Tiedens, Shari; [43] see Swope, Karen K.; [174] see Unverzagt, Callie J.**

**Plunger, Elizabeth and Paul Goldstein (UC-San Diego)**

[81] *Status and Group Identity in Moquegua Tiwanaku: Textile Evidence from the Rio Muerto Cemeteries (M43 A and B), Moquegua, Peru*

Textiles serve as an important medium for the communicating socio-cultural information in societies throughout the world, including those of Andean South America. A comparison between the textile items (garments, etc.) from two cemeteries at Rio Muerto (M43) in the Moquegua Valley show differences in quality and elaboration that suggest that different types of social status and group identity affected both life and death in this Tiwanaku settlement. The group of textiles examined for the study includes the burial assemblages of 45 individuals from secure contexts. This study also emphasizes the importance of textile research in this region known for extraordinary materials preservation.

[81] *First Chair*

**Plunket, Patricia (Universidad de las Americas) and Gabriela Uruñuela (Universidad de las Americas, Puebla)**

[20] *The Anchors of Hearth and Home: Materializing Memory and Tending Tradition in Tetimpa during the Terminal Formative*

The excavation of over 30 houses at Tetimpa, a Formative village in western Puebla that was buried under volcanic ash during the first century AD, provides exceptional evidence for many facets of daily life and domestic organization in highland Mexico prior to Teotihuacan's emergence as a supra-regional power. In this paper we examine the nature and contexts of the diverse non-utilitarian stones used within these households, and subsequently we discuss their possible roles in family ritual practice. Finally, we consider the importance of pattern recognition in non-utilitarian stone assemblages for the study of domestic ritual in ancient societies.

[7] *Discussant*

**Plunket, Patricia [20] see Uruñuela, Gabriela**

**Pobiner, Briana [88] see Potts, Richard**

**Pohl, Mary [99] see Doering, Travis F.**

**Pokines, James (JPAC Central ID Lab), Deborah Blom (University of Vermont) and Nicole Couture (McGill University)**

[12] *Microfaunal Remains from Tiwanaku*

Ongoing excavations at Tiwanaku have yielded significant vertebrate microfaunal remains (species < 5 kg adult mass), including mammals, birds, fish, and amphibians. Preliminary taxonomic, paleoecological, and taphonomic analyses are presented here. Mammalian fauna present include the rodent species *Akodon boliviensis* (Bolivian grass mouse), *Eligmodontia puerulus* (Andean gerbil mouse), *Auliscomys sublimis* (Andean leaf-eared mouse), *Ctenomys leucodon* (white-toothed tuco-tuco), *Galea musteloides* (common yellow-toothed cavy), and *Cavia* sp. (cuy or guinea pig). Evidence for significant utilization of the latter taxon as a food resource has not been detected. These results are compared to the microfaunal remains from Khonkho Wankane, a Tiwanaku satellite center.

**Politis, Gustavo (CONICET- UNCPBA- ARGENTINA), Alfredo González Ruibal (Universidad Complutense de Madrid), Almudena Hernando Gonzalo (Universidad Complutense de Madrid) and Elizabeth Beserra Coelho (Universidade Federal do Maranhão)**

[139] *Ethnoarchaeology of projectile point discard patterns among the Awá (Guajá) hunter-gatherers of the Brazilian Amazon forest.*

The Awa are a group of hunter-gatherers in transition who reside in the forests of Maranhão, Brazil. After their contact with western society their culture, and their material culture, has gone through important transformations. However, the persistence of bow and arrow use is remarkable. In this paper we will present information about projectile point discard loci and the stage in which they are disposed. We will analyse the explanation given by the Awa about why they abandon projectile points, when some of the points are still potentially useful. Finally, we will explore the multiple dimensions of discard patterns and implications

**Pollack, David [23] see Henderson, A Gwynn**

**Pollock, Adam [155] see Macrae, Scott A.**

**Pool, Christopher (University of Kentucky)**

[148] *Researching Formative Period Political Economy at Tres Zapotes, Veracruz, Mexico*

Alone among major Formative centers in the southern Gulf lowlands, Tres Zapotes, Veracruz offers the opportunity to observe changes political economy from Olmec through epi-Olmec times. Previous archaeological survey suggested this transition involved a shift from exclusionary to cooperative governing strategies at the level of polity administration. The current cycle of research begun in 2003 by the Proyecto Arqueológico de Tres Zapotes employs multidisciplinary methods to test this proposition. This paper contextualizes other contributions to the symposium with respect to variation in Formative political economies, the objectives and methods of the project, and the contexts sampled in excavations.

[92] *Discussant*; [148] *see Ortiz Ceballos, Ponciano*

**Popenoe Hatch, Marion (Univ. del Valle, Guate.)**

[149] *Trade between the Guatemalan Highlands and South Coast 800 BC-800 AD*

Several trade routes are proposed which connected the Guatemalan highlands with the South Coast during Pre-Columbian times. The identification of these routes is based on the archaeological ceramics of what are considered to have been the major centers of redistribution (Takalik Abaj, Kaminaljuyu, El Porton, etc.), and topographical features which facilitated the trafficking of goods. The analysis of ceramics shows shifts in interaction between the various regions throughout the sequence. The talk will discuss the proposed trade routes and the changes in commercial ties that occurred.

**Poplin, Eric (Brockington and Associates Inc) [14] First Chair**

**Popov, Alexander (Alexander Popov) and Tabarev Andrei (Institute of Archaeology & Ethnography, Novosibirsk, Russia)**

[167] *Landscape Changes in the Neolithic of the Russian Far East: Natural, Cultural, and Ritual*

One of the principle peculiarities of the Holocene archaeological cultures in the Maritime Region is their high dependence on the climatic and landscape changes which took place during last 11 000 years. It may be traced by the permanent changes of archaeological cultures within periods of climatic rhythms' shifts. The comparison of climatic conditions and cultural dynamics in early and Middle Holocene points on direct influence of nature processes (landscape transformation, changes in faunal and floral assemblages connected with the fluctuations of the sea level and temperature-humidity conditions) on the change of archaeological cultures in the region.

**Porcasi, Judith (Cotsen Institute of Archaeology at UCLA)**

[129] *Tracing a Post-Pleistocene "Broad-Spectrum Revolution" on the California Coast*

An expansive spatio-temporal approach is used to explore coarse-grained variations in exploitation of faunal resources at coastal and pericoastal sites along 500 miles of the Central and Southern California coast with occupations spanning nearly 10,000 years. Allometrically estimated faunal biomass and specimen frequencies are arrayed in chronological sequences of abundance indices to develop long-term, region-wide patterns of resource usage. Unexpectedly, and contrary to narrower, shorter-term archaeological findings, consumption of all classes of animal flesh appears to have declined markedly over time throughout the coastal region even though populations grew and societies became more complex. This pattern is consistent with pervasive adoption of a more carbohydrate-focused diet incorporating non-faunal resources increasingly available in the emergent Holocene and the more southern latitudes. A long-term Pleistocene-to-Holocene adaptive "revolution" by coastal populations is suggested.

**Porcayo, Antonio (INAH)**

[47] *Un Conchero de El Alto Golfo de California*

El sitio arqueológico El Faro, San Felipe, del Alto Golfo de Baja California, es el primer sitio excavado en esta porción de la Península de Baja California. A un nivel diacrónico y sincrónico está revelando información hasta ahora desconocida sobre los pobladores de estas tierras. Con los resultados obtenidos se discutirá cuál es el verdadero impacto que las antiguas poblaciones norbajacalifornianas ejercieron sobre los recursos marinos, o si estos se atribuyen directamente a cambios climáticos donde la mano del hombre no fue determinante en los recursos accesibles para su explotación.

**Porter, Kevin (Florida Bureau of Archaeological Research) and C. Andrew Hemmings (Texas Archaeological Research Laboratory [TARL] at University of Texas, Austin)**

[125] *A Stone's Throw from the Wakulla Springs Lodge Site (8WA329): A Megafauna Watering Hole?*

A potential mastodon (*Mammuth americanum*) site, recently identified in Florida's Wakulla Springs basin, may be the latest in a long line of Pleistocene megafauna discoveries in this locale. Based on calcitic silt sediment depth and subsurface anomalies, the site appears to contain an intact specimen, one that, when considered in the close proximity of the terrestrial paleoindian site, 8WA329, and the presence of paleoindian tools in the spring basin, may hold tremendous archaeological and paleontological research value in understanding the earliest occupants of the Americas.

**Porubcan, Paula (Univ of WI-Milwaukee)**

[40] *Modeling Changes in Historic Period Potawatomi Social Structure: An Examination of Community Connectivity*

Concentrated Potawatomi occupation of southeastern Wisconsin begins circa 1790, continues through the time of forced removal (1836), and decreases by the 1880s. Coincident with this trend, is an increasingly intensive Euro-American occupation of this same landscape. Additionally, we note that Potawatomi and Euro-American habitation site locations shift considerably throughout this time. The changing nature of intra- and inter-ethnic social/economic networks is examined by measuring degrees of community connectivity. Using Network Analyst, a series of origin/destination matrices are generated for a single river drainage system. Mean accessibility values are used to indirectly examine shifts in the nature of community interaction.

**Possehl, Gregory (University of Pennsylvania) [39] *Discussant*****Potter, James (SWCA)**

[144] *The Hunter and the Hunted: What Faunal Remains Reveal about Early Pueblo Village Cuisine, Ritual Organization, and Social Power*

The Pueblo I period (A.D. 750-900) saw the formation of some of the earliest and largest village communities in the northern Southwest. This paper explores the effect this major social organizational transition had on hunting behaviors, the ritual use of fauna and, more generally, cuisine. The analysis includes large communities from the Dolores River Basin and from across the northern Southwest to explore both changes through time and variation across space during this dynamic time period.

**Potts, Richard (Smithsonian Institution) and Briana Pobiner (Smithsonian Institution)**[88] *Smithsonian Exhibition on Human Evolution: 'What Does It Mean To Be Human?'*

To help advance public understanding of human origins, a new, permanent exhibition will open in November 2009 at the Smithsonian's National Museum of Natural History. Displays will present fossils and artifacts (originals, casts, reproductions) from Paleolithic sites in Africa, Asia, and Europe that explain the major milestones in hominin adaptation and environmental context. This poster enables the scholarly community to examine our scientific treatment, methods of public outreach, and challenges of presenting human evolution on the U.S. National Mall. The Smithsonian will simultaneously launch a human evolution education initiative that will rely on a network of scientists, educators, and organizations.

**Potts, Tara**[142] *Imported Glass in Traditional Women's Work*

Artifacts and features associated with deerskin hide processing were recovered during a recent excavation at a Historic Creek (Muskogee) site in Elmore County, Alabama. Of special interest are the production and use of bottle glass scrapers and the flake debris derived from their manufacture. Ethnohistorical and ethnoarchaeological research has provided insight into the gender roles of the late-eighteenth century Creeks, and data regarding gender roles and tool manufacturing, respectively. These data sets allow for an exploration of gender roles, specifically female tool use, manufacturing, and raw material choice, of the Historic Creek populations.

**Poupeau, Gérard [95]** see *Carter, Tristan*

**Powis, Terry [192]** see *Hansen, Gregory J.*; [192] see *Hohmann, Bobbi M.*

**Pozorski, Shelia [15]** see *Pozorski, Thomas*

**Pozorski, Thomas (University of Texas-Pan American) and Shelia Pozorski (University of Texas-Pan American)**[15] *Pre-Moche Warfare Depicted in the Carved-Stone Facade of Cerro Sechin in the Casma Valley of Peru*

Depictions of Moche warfare abound, but earlier iconography featuring warfare is less common. One notable early example is the carved-stone facade of Cerro Sechin. Iconographic details and other data suggest these carvings depict intravalley conflict between secular administrators and religious elite. Details within the iconography suggest that the religious sector lost and was further disgraced by mutilation. The overall toll on the local Sechin Alto Polity was considerable, resulting in the abandonment of major component sites and the consolidation of power within a single newly-rebuilt center.

**Prentiss, Anna (University of Montana), Curtis Osterhoudt (Los Alamos National Laboratory), Nathan Goodale (Hamilton College) and Nicole Crossland (The University of Montana)**[44] *Cultural Transmission and the Organization of the Lithic Technology: The Slate Tool Industry from the Bridge River Site, British Columbia*

Lithic technologies evolve through a process incorporating socio-economic behavior, cultural transmission, drift and selective feedback. Consequently, variation in artifact assemblages can result from actions associated with techno-functional problem solving and application of inherited cultural traditions. Excavations at the Bridge River housepit village have revealed a unique slate tool industry. Tools were manufactured from local raw materials using a variety of techniques resulting in a diversity of forms and functions. This paper provides a quantitative analysis designed to explore the dual roles of inheritance and situational decision making in the manufacture and use of these tools.

**Prentiss, Anna [44]** see *Fontes, Lisa M.*; [88] see *O'Boyle, Robert C.*; [118] see *Wanzenried, Michael*

**Prevedorou, Eleni Anna (Arizona State University), Demetrios Chatzilazarou (2nd Ephorate of Byzantine Antiquities), Eleni Stravopodi (Ephorate of Palaeoanthropology and Spelaeology of S. Greece), Jane Buikstra (Arizona State University) and Lina Kormazopoulou (Ephorate of Palaeoanthropology and Spelaeology of S. Greece)**[130] *Death in Andritsa Cave, southeastern Greece: Shedding light on dark caves*

Preliminary investigation of Andritsa Cave, Greece, revealed an assemblage of artifacts, including vessels, oil lamps, coins and a Christian cross, and human skeletal material representing at least



38 individuals. These remains, found in clusters on the surface of the cave floor, date to the late 6th century A.D. The particular nature of the assemblage along with the difficult access to the cave via a 14 m. deep vertical shaft, may suggest that the cave was used as a refuge by a group of local inhabitants that became trapped in the cave while trying to escape some danger and subsequently died.

**Price, Sarah E. Price (University of South Alabama) Gregory Waselkov (University of South Alabama)**

[142] *Organization of Bone Technology on the Alabama Gulf Coast*

Excavations at site 1BA21, a Weeden Island shell midden on Alabama's Gulf coast yielded a large, well-preserved bone tool assemblage. This type of assemblage is unprecedented for the area and presents an opportunity to examine a seldom documented aspect of prehistoric culture. Borrowing from lithic studies, our analysis is structured by an Organization of Technology approach. We explore acquisition of materials, manufacture, use, reuse/recycling, and discard of tools within the site context. We also offer inferences drawn from this analysis in regard to Late Woodland economic and social organization, and Late Woodland lifeways in general.

**Priewe, Sascha (Oxford University)**

[62] *Jade biographies from the Middle Yangzi River*

Towards the end of the 3rd millennium BC, small jades were deposited in burial urns along China's Middle Yangzi River. Among these jades, those in the shape of a human(-like) face were particularly conspicuous. This paper will trace the material life of these jades, which was played out along two major lines: On the one hand, the iconography of the jade faces appears to be reproduced on jades and bronzes in ritual contexts during the 2nd millennium BC. On the other, the original late Neolithic jade faces themselves re-appear in Bronze Age tombs.

**Proebsting, Eric (Thomas Jefferson's Poplar Forest)**

[140] *"Changes in the Land": The Historical Ecology of three Farming Communities along the Southern Frontier of America (1820-1860)*

Settlers brought tremendous environmental changes as they moved across the United States during the first half of the nineteenth century. Each day they interacted with each other and their world, establishing agricultural communities in a truly dynamic landscape. This paper presents part of my ongoing research, which uses historical ecology to examine three antebellum settlements. Two of these were located in the Ozark uplands, while the third was located in the lowlands of southwest Arkansas. Information from a wide variety of written, environmental and archaeological sources is analyzed and discussed using a unique combination of interdisciplinary methods and theory.

**Prowse, Tracy L. [142] see Lapham, Heather A.**

**Prufer, Keith (University of New Mexico), Jaime Awe (Belize Institute of Archaeology), Brendan Culleton (University of Oregon), Bruce Winterhalder (University of California at Davis) and Douglas Kennett (University of Oregon)**

[83] *Modeling Complex Human Behavioral Responses to Climate Change in the Eastern Periphery of the Maya Lowlands*

This paper reports on current efforts to model complex interactions between climate change and the development and collapse of integrated sociopolitical systems. Using a theoretical framework drawn from behavioral ecology, we explore the integration of key variables: population density and distribution, agricultural intensification, and the development of social hierarchies in relationship to endogenous climate change. We further discuss ground truthing and testing of the model at Uxbenka, a Maya polity where the growth of socioeconomic systems were marked by demographic expansion, landscape modification, political fissioning, and environmental degradation prior to political and demographic disintegration ca. 1100 B.P.

[115] *Discussant*

**Prufer, Keith [99] see Kalosky, Ethan K.**

**Przadka-Giersz, Patrycja (University of Warsaw) and Milosz Giersz (University of Warsaw)**

[60] *Socio-Political Transformations During The Middle Horizon-Late Intermediate Period Transition As Revealed In The Archaeological Record From The Culebras Valley, North Central Coast Of Peru*

Since 2002 the Culebras Valley has been the focus of an extensive archaeological surface survey and limited excavations in selected sites carried out by Polish and Peruvian scholars. Over one

hundred previously unknown archaeological sites have been recorded so far, and tentative interpretations of their chronology, functions and settlement patterns have been suggested. In this paper we will present an overview of the settlement patterns, subsistence and craft production, focusing on Middle Horizon components as well as the problem of the impact of Casma and Chimú cultures on local pre-Hispanic societies.

**Puckett, Heather (Alabama National Guard), Cheryl Huckerby (National Guard Bureau), Deanna Griffin (Florida National Guard) and Rita Fields (Mississippi National Guard)**

[51] *Tribal Consultation in the World of CRM: The Added Value of Implementation*

In the world of Cultural Resource Management (CRM), Tribal consultation is mandated under a myriad of federal laws, regulations, executive orders and policies. The National Historic Preservation Act (NHPA), the Native American Graves and Repatriation Act (NAGPRA), their associated regulations, Executive Order (EO) 13175, Department of Defense (DoD) Native American Policy are key examples; however, implementation of consultation is often trickier than these documents make it sound. Cultural Resource Managers, who are often tasked with being the tribal liaison, look at the policies and suggested ways to comply and end up sending letters with an occasional phone call to follow up on the timeliness of receiving a response from the tribes. Organizing even an annual meeting to address upcoming projects and proposed activities within the realm of the CRM is considered a challenge and seemingly overwhelming task. Yet such meetings are an important way to address the intent of these consultation requirements: to build relationships. Building on individual relationships and the realization that tribal areas of interest cross state borders, Army National Guard states Alabama, Florida, and Mississippi have organized successful multi-state and tribal meetings which have promoted, endorsed and enhanced relationships between all participants: tribal and Guard. This presentation discusses the challenges of organizing such a meeting and the benefits for the tribes and organizations involved.

**Pugh, Timothy [102]** see *Yacubic, Matthew Patrick*

**Punzo, Jose (Instituto Nacional de Antropología e Historia) and Hugo Sandoval Martínez (Centro INAH-Durango)**

[99] *Virtual architecture, Virtual archeology. Recreating spaces of the Cueva del Maguey, a cliff dwelling, in Durango, Mexico.*

The use of virtual architecture had several applications in archeology in the last two decades. The Cueva del Maguey site in the Sierra Madre of Durango, offer us a unique example about cliff dwellings in Mexico. The excellent conservation of the materials allow us, using virtual reality, to summarize all the archeological information we recovered and visualize the architectural knowledge of the Chalchihuites people how settle the Sierra Madre between 1100 and 1350.

**Punzo Diaz, Jose Luis [132]** see *Muñiz, David A.*

**Purcell, David (Logan Simpson Design, Inc)**

[49] *Ground Stone Manufacturing at the Great Basin/Southwest Interface*

Continuing research at the Big Bend Quarry, a 50,000-acre ground stone quarry and implement manufacturing site in northwestern Arizona, expands on previous observations of this specialized lithic industry, which includes manufacture of large andesite metates and unifacial quartzite hammerstones used to shape them. Statistical analyses of over 1600 features are quantifying details of the spatial structure and organization of ground stone implement manufacturing in the Lower Colorado River valley. Data from contiguous block surveys indicates that specific raw materials were the focus of metate and hammerstone manufacturing within the site, with prospecting for siliceous toolstone an important secondary activity.

**Purdue, Louise (CEPAM-CNRS)**

[175] *Geoarchaeology and Micromorphology of the Long Term Hohokam Irrigation System*

In semi-desert environments, agricultural communities which are dependent upon irrigation systems must contend with environmental constraints and impact on land use. By studying irrigation canal infillings from a geoarchaeological/micromorphological approach, it is possible to understand the interaction between hydrosystems (through an analysis of canal sediments that register secondary information on fluvial dynamics) and agrosystems (by focusing upon the anthropic origin of canals). The research presented in this poster outlines a recent study in which we have used micromorphological studies of Hohokam irrigation canals along the Lower Salt River Valley in Arizona to correlate their paleoecological signatures to the archaeological record.

**Putsavage, Kathryn (University of Colorado)**

[164] *Mesa Verde Style Mugs: An Analysis of Domestic and Ritual Functions*

Mesa Verde Style Mugs have fascinated Southwestern archaeologists for over a century, yet little research focuses on this uncommon vessel form. Mugs appear between A.D. 1100 and 1300. To determine functions of mugs several lines of evidence were examined. Depositional contexts were investigated at nine Northern San Juan sites. Use-wear patterns were examined using museum collections. The distribution of mugs across the Southwest was also considered. Although mugs have previously been characterized as primarily ritual in function, this study suggests that mugs likely functioned in both domestic and ritual arenas of the Ancestral Puebloan people.

**Pyburn, K. (Indiana University)**

[131] *Archaeologists as Applied Anthropologists*

A library of books praising community-based archaeology is now available, but although collaboration with government agencies and multinational corporations is common, archaeology has not benefitted from applied anthropological research on corporate culture. Archaeologists consistently fail to see themselves as change agents in such contexts. In order to resist the inclination for such hybrid programs to devolve into artifact collecting or a reification of corporate values, archaeologists need training in applied anthropology to be able to negotiate not only with indigenous communities, but also with multinational corporations, government agencies and even military organizations.

**Pye, Jeremy (University of Florida), Kristin Sewell (Statistical Research, Inc.) and Shannon Acothley (Statistical Research, Inc.)**

[43] *The Archaeology of Death and Funerals in Nineteenth Century Tucson*

Mortuary practices are an increasingly popular topic of study in recent years with focus on the Victorian movement toward the "Beautification of Death" in which elaborate, deeply mournful displays of grief and memorializing the dead were essential. In Tucson, however, when the transcontinental railroad had yet to forge its way into the landscape, and eastern settlers were still relatively few, the material culture of mourning and burial was mostly unchanged from practices brought by the priests of the Spanish missionary period. In this paper, we discuss funerary artifacts with respect to these merging traditions, memory and placement in the cemetery.

**Pyszka, Kimberly (University of Tennessee) and Maureen Hays (College of Charleston)**

[140] *Dixie's Rising Tide: A Case Study of Lowcountry Settlement Patterns from Frontier to Plantation*

Granted in the 1680's and nearly continuously occupied until 1995, "Dixie Plantation", near Charleston, SC is historically and archaeologically significant. Its location on the Stono River allows for investigations into initial population movements south in pursuit of the Indian trade. Later, its location on a major Charleston thoroughfare stimulates discussions into the development of Lowcountry plantations from their inception at the turn of the 18th century, through their agricultural demise at the end of the Civil War. This presentation will discuss current archaeological investigations and the property's role in answering broader questions of Charleston's settlement and plantation past.

**Quach, Tony, Hector Neff (California State University Long Beach) and John G. Jones (Washington State University)**

[58] *Paleoenvironmental Investigations of the Tecojate Region of Coastal Guatemala and Implications for the Classic Maya Collapse*

Catastrophic climate change has always been one of the most oft cited reasons for the collapse of the Classic Maya. Though there have been notable shifts in the climatic record of various regions of the Maya area, one cannot assume that individual records are representative of the whole. Using geochemical and pollen data from a core taken from the Tecojate region of Coastal Guatemala, a paleoenvironmental reconstruction of the region was made to evaluate these claims.

**Quezada, Osiris, Amaranta Argüelles (PTM-INAH) and Norma Valentín (INAH)**

[38] *Archaeological evidence of eagle's captivity and taxidermy at Templo Mayor*

Seven large shell mounds excavated in the Mikawa bay are called "Muro shell mounds" in the final Jomon Period (c.3300-2500 cal BP). Onishi shell mound, which is the biggest one of them, is 185 meter in length and 2.5 meter in depth of the layer. There are two peculiarities about them. The first is that they don't include fish bone, animal bone, fishing implements and pottery but only

shell. The second is that clam (*Meretrix lusoria*) occupies over 90 percent of the whole shell. We estimate Jomon people boiled and dried clams to exchange and trade.

**Quilter, Jeffrey (Peabody Museum, Harvard University) [15] Discussant [97] Discussant**

**Quinn, Allen [53] see Pedler, David**

**Quinn, Colin (University of Michigan)**

[44] *Signals in Stone: Exploring the Role of Social Information Exchange, Conspicuous Consumption, and Costly Signaling Theory in Lithic Analysis*

There is a promising relationship between evolutionary grounded costly signaling theory and understanding lithic technological systems. Past approaches range from interpreting human behavior through lithic assemblages to examining socially embedded information and costly displays that the rocks themselves carry. This paper highlights the potentials and pitfalls of studying costly signaling, conspicuous consumption, and social information exchange within lithic assemblages. I suggest that to improve the integration of costly signaling to understand lithic technological systems, it is vital that we incorporate methodologically sound models and archaeologically testable cases.

**Quinn, Patrick (University of Sheffield) and Margie Burton (San Diego Archaeological Center)**

[110] *Ceramic Petrography, Craft Technology and Cultural Identity in Pre-Contact Southern California*

Detailed petrographic analysis of plain, undecorated native sherds from sites in the Anza-Borrego Desert State Park, San Diego County, is providing new insights into a forgotten ceramic tradition that once covered much of southern California. By examining these innocuous artefacts at a microscopic level, it has been possible to reconstruct numerous key aspects of potters' technological choices, including paste preparation, forming and firing. The identification of geographically-restricted ceramic compositions characterized by specific combinations of raw materials and manufacturing technology provides vital evidence for the craft practises and cultural identities of the different ethno-linguistic groups that inhabited this area.

**Quirk, Phillip (Edwards-Pitman)**

[80] *General Overview of 2007-2008 Excavations at Long Swamp (9CK1)*

Edwards-Pitman Environmental Inc. conducted excavations of portions of the Long Swamp Site (9CK1) west of Georgia Route 372 between November 2007 and May 2008. Excavation on the terrace revealed a Proto-historic Lamar structure, and features dating to the Lamar, Woodstock, and Etowah phases. The floodplain excavations exposed portions of an Early Etowah Phase village, including a large structure, a palisade wall, and many associated pits of varying size and function. This paper will present an overview of previous investigations and a general overview of the findings from this project, including discussion of the structures and the more prominent features.

**Quist, Juliana and Brian Billman (UNC- CH; MOCHE, Inc.)**

[121] *Ornaments and Metals from Noble Households at Cerro Leon on the North Coast of Peru*

Preliminary analysis indicates that metal goods and stone ornaments were manufactured within noble households at Cerro Leon. Artifacts were recovered from the largest compound at the site (Compound 1) and four adjacent intermediate-sized compounds. The frequencies of ornament and metal artifacts give insight into activities conducted within rooms and patios in those compounds as well as the status of the residents. In addition, the sources of the materials utilized point to the existence of systems of regional trade in the early part of the Early Intermediate period.

**Quitmyer, Irvy and Douglas Jones (Florida Museum of Natural History, University of Florida)**

[46] *Still Listening: Four Decades of Hard Clam (*Mercenaria* spp.) Sclerochronology on St. Catherines Island, GA*

Hard clams form alternating light and dark shell growth increments which record an organism's life and environmental history. For nearly forty years sclerochronologists have been playing back shell recordings made in the waters around St. Catherines Island. These recordings start in the late Archaic and help to address two enduring questions: 1) when in the annual cycle did people use a given site; and, (2) is there evidence for anthropogenic change? Evidence for intensive, year-round use of St. Catherines Island hard clams is examined with a robust record for zooarchaeological assemblages from the Georgia Bight.

**Raab, Ann (University of Kansas)**

[53] *Through the Window Glass: The Challenge of Establishing Chronology for Missouri/Kansas Border War Archaeology*

Archaeological research in Bates County, Missouri is adding much to our understanding of socio-economic responses to violence. Relentless partisan warfare in the run-up to the Civil War culminated in Quantrill's raid on Lawrence, Kansas in 1863. Union General Ewing then issued General Order No. 11, depopulating and destroying private property in four counties. Within one decade, the area went from booming frontier to desolate wasteland. A primary challenge is maintaining chronological control in such short-term occupation sites. An analysis of window glass thickness at the site is proving to be an effective tool in resolving these chronological challenges.

**Raczek, Teresa [39]** *see Gullapalli, Praveena*

**Rademaker, Kurt (University of Maine), David Reid (University of Maine) and Gordon Bromley (University of Maine)**

[40] *Connecting the Dots: Paleogeography, Least-Cost Path Modeling, and the Search for Paleoindian Sites in Southern Highland Peru*

GIS least-cost path modeling is a critical component of our interdisciplinary investigations of related Paleoindian sites in southern Peru. The Alca source, Peru's largest highland obsidian deposit, was first used by Paleoindian foragers ~13,000 years ago at the coastal site Quebrada Jaguay. Incorporating data from mapping and geochemical characterization of toolstone source deposits, resource modeling, and local paleoenvironmental research, we have defined a predictive least-cost corridor linking Quebrada Jaguay with resources in interior ecozones. Initial investigations of the corridor have successfully identified contemporary Paleoindian sites in the highlands, highlighting the usefulness of least-cost path modeling when constrained by paleogeographic data.

**Radikovna Usmanova, Emma [50]** *see Ventresca, Alicia*

**Rafferty, Janet (Cobb Institute of Archaeology), Jeffrey Alvey (Mississippi State University) and Keith Baca (Mississippi State University)**

[99] *Results of Systematic Significance Assessment Applied in a Large Survey Project*  
CRM survey projects usually require assessment of site significance, often determined unsystematically or with undue weight given to site integrity. Work on a 31,000 acre survey in central Mississippi allowed significance determinations to incorporate variability among occupations, measured using five dimensions: temporal placement and duration, measured using diagnostics; occupation intensity, measured using soil chemistry; and artifact class richness and evenness. Integrity was evaluated separately for each group of classified occupations, based on preservation of soils and intact deposits. This system, augmented by Choctaw cultural concerns, is applied to assemblages from ca. 400 sites to make recommendations on further work.

**Rafferty, Sean [116]** *see Rieth, Christina B.*

**Raharijaona, Victor (U of Fianarantsoa) and Susan Kus (Rhodes College)**

[177] *Relentless dance and taunting verse: Body and emotion in the theatre of war in pre-colonial Madagascar*

Warriors in Madagascar engaged in dance to prepare for battle, taunt enemies, and celebrate victory. But it was also customary for females to dance and sing non-stop in villages to sustain the actions of the warriors while in battle. Forceful poetic taunting of the enemy is to be expected also in primarily oral societies. Yet, in highland Madagascar troops from the same side were divided into two competing groups, and sanctioned poetic taunting between the groups spurred troops into battle. This contribution focuses on the poetically and physically (e)motivated bodies of male and female in pre-colonial internecine warfare in Madagascar.

**Railey, Jim (SWCA - Albuquerque)**

[49] *The Bow and Arrow and Changes in Debitage Assemblages*

Changes in flintknapping technologies and debitage assemblages from pre-ceramic to ceramic times have long been recognized in the Southwest and other parts of North America. These changes involve a shift from an emphasis on bifacial production to a more expedient, core-flake technology, and have been attributed to reduced mobility. Some of the assumptions underlying this interpretive paradigm are being challenged, however. The introduction of the bow and arrow

may have played a larger role in shaping these patterns than reduced mobility, and this paper presents supporting data for this argument from a large excavation project in southern New Mexico.

**Rakita, Gordon (University of North Florida) and Todd Van Pool (University of Missouri)**

[32] *Ground Penetrating Radar at the 76 Draw Site, Luna County, New Mexico*

At the far northern edge of the Casas Grandes interaction sphere is a Medio Period site located along the 76 Draw in southern New Mexico. Surface materials include lithics, a distribution of mixed Chihuahua and Mimbres potsherds, and three possible collared hearths. In the summer of 2008, a team of researchers from the University of Missouri and the University of North Florida conducted a ground penetrating radar (GPR) survey of a small portion of the site. This poster describes the results of that survey and discusses the potential for GPR in the region.

[32] *Second Chair*

**Ramenofsky, Ann (University of New Mexico)**

[13] *Glaze-Paint A Yellow: Chronological Problems*

Mera's glaze-paint sequence (A-F) is largely chronological and useful for estimating the age of settlement surface assemblages in the central and northern Rio Grande. Although recent frequency seriations from San Marcos Pueblo generally support Mera's sequence, glaze-paint A Yellow (Cienegilla Glaze Yellow) poses a significant temporal problem. Efforts to include this type in the larger San Marcos frequency seriation have failed. The lack of chronological fit within the San Marcos seriation matrix is explored through several iterations, using the assumptions of the seriation method to frame the problem. Causes of the ahistorical nature of the type are considered.

[171] *see Kulisheck, Jeremy R.*

**Ramirez, Gustavo**

[111] *Central Veracruz Style in the plasticity of late formative and postclassic in the Huasteca, Mexico*

The archaeological explorations in the Huasteca have provided archaeological materials in sculpture, ceramics and architecture that share decorative elements in the so-called "central Veracruz style." This style that prevails in El Tajín, is present in objects ranging in the Huasteca from the Late Formative until Postclassic (500 BC to 1500 AD). But their similarities, "Central Veracruz style," present regional stylistic variations related to the Central Highlands and the Maya area that also change over time. Here we analyze the Huastec variables understanding how it spreads across the eastern half of Mesoamerica, for a thousand years.

**Ramos Fernandez, Mabel [12] see Bruno, Maria C.**

**Rancour, Brittany [53] see Workman, Terry W.**

**Rancour, Brittany and P. Nick Kardulias (The College of Wooster)**

[174] *The Development of the Medieval Walled City of Cork, Ireland (c. 900-1500)*

This study examines the growth and development of the medieval walled city of Cork, Ireland, through public, economic, and domestic architecture. Three key periods are under investigation: c. 900 when the Vikings settled the area; the late-12th/mid-13th century when sources reference the building of the city walls, and c. 1500 before the dismantling of the city walls. The main questions to be answered are: what priorities influence the location of settlements, what factors determine the location of centers within a settlement (with emphasis on location inside and outside the town walls), and what the data reveal about the society.

**Randklev, Charles, James Kennedy (University of North Texas) and Steve Wolverton (University of North Texas)**

[18] *A Taphonomic model of Interspecific differential preservation of freshwater mussel remains (Family Unionidae).*

Archaeological mussel remains are often used to study prehistoric environments, but zooarchaeologists confront taphonomic issues that affect measures of taxonomic richness and abundance. Remains of thick-shelled species preserve well, but those of thin-shelled species do not. This raises questions: were some species actually rare? Or are diagenetic processes responsible for low abundance of remains? Studies suggest fragmentation from sedimentary compaction affects shells that are spherical in shape less, increasing preservation. We examine sphericity  $[(bc/a^2)^{0.33}]$  for twelve species from North Texas to determine if it influences preservation. Results suggest that preservation of shellfish remains are explained by density and sphericity.

**Rankin, Adrienne [10]** *see Doyel, David E.*

**Ransom, Jeff B. [67]** *see Carr, Robert*

**Rasic, Jeffrey (National Park Service)**

[49] *A Functional Classification for Stone Tool Caches*

Sets of complete stone tools found within small areas are typically labeled caches. However, there is significant functional variation among these assemblages. This paper examines the composition of such assemblages and derives a finer-grained understanding of the purposes for which such deposits were created and came to enter the archaeological record.

[49] *First Chair*

**Rautman, Alison [18]** *see Chamberlin, Matthew A.*

**Raviele, Maria (Michigan State University)**

[88] *Exploring Quantification of Maize Phytolith Densities through Experimental Residue Analysis*

Phytolith studies of ceramic residues demonstrate the feasibility of identifying those plants present at the time of residue creation. Phytolith studies are unable to determine, however, the percentage of each plant utilized in the cooking process. Developing the ability to do so could potentially contribute to an understanding of the importance of that food resource in a prehistoric diet. This poster presents preliminary results obtained in attempting to quantify maize phytolith densities through analysis of experimental residue samples based on the percentage of maize used to create the residue.

**Razeto, Anna (UCL, IoA)**

[86] *Comparing East and West: Urban Production and Consumption in the Roman and Han Empires*

This paper compares the urban forms of Han China and the Roman territories between ca. 200 BCE and 200 CE. It specifically focuses on the examination of structures related to commerce and production in the urban context, but also explores the historical, social and economical backgrounds that produced these structures. This paper will present the material from a descriptive point of view, but will also attempt to place it in the context of broader issues of urbanism and World Systems.

**Rebay-Salisbury, Katharina**

[25] *Cremation or inhumation: changing burial rites and the body in Bronze Age Europe*

The change from inhumation to cremation in large parts of Europe represents an interesting challenge for analysing and interpreting how the human body was treated and understood in the Bronze Age. The routine, deliberate transformation of bodies through cremation indicates a radical shift in beliefs about what constituted the body and how its parts 'belong' together after death. Exploring similarities and differences of inhumation and cremation burial practices, this paper presents the results of the Bronze Age part of the Leverhulme Trust-funded project 'Changing beliefs of the human body' based at the University of Cambridge.

**Rechtman, Robert (Rechtman Consulting, LLC)**

[84] *New Approaches in Dating and Interpretation of Petroglyph Sites in Hawai'i*

Two concentrations of petroglyphs were recorded during an archaeological study on the western side of Hawai'i Island in the inland portion of the traditional land unit (ahupua'a) of Ka'ūpūlehu. Both sites were documented in detail and appear to be temporally and functionally interrelated. To establish a temporal context, a new direct dating technique, developed by researchers at Arizona State University, was employed. This technique measures the accumulation of silica glaze within subsurface micropores of the basalt in which the petroglyphs have been created. It was also possible, using Accelerator Mass Spectrometry to directly date oxalates trapped under the silica glaze. An analysis of the petroglyphs in light of ethnohistoric data, information on symbolic importance, and the Hawaiian system of gestural symbolism, provides a foundation for interpretation.

**Redder, Torben [115]** *see French, Matthew Patrick*

**Reddy, Seetha (Statistical Research, Inc)**

[41] *Seeds of Change: Intensive Plant Exploitation in Protohistoric coastal Southern California*

Several scholars have asserted that low level food production and aboriginal horticulture took

place prior to Spanish contact in prehistoric coastal Southern California. This talk synthesizes recent archaeological investigations into prehistoric plant usage in a variety of settings in coastal southern California. New macrobotanical data provide direct evidence for prehistoric plant usage and reveal varied trajectories in the intensification of small seeded plant use. Notably, during the Mission period, Native populations in the Los Angeles Basin selectively targeted certain grasses for intensive collection while populations further to the south did not. The talk will evaluate the utility of resource intensification models, and whether localized Native American populations were on a path toward food production.

[178] *see Douglass, John G.*

**Redmond, Brian (Cleveland Mus Nat History)**

[17] *Shells, Corn, and Cotton: Recognizing Late Woodland Transegalitarian Societies in Northern Ohio*

The assumed rarity of social inequality in most Late Woodland societies is being reconsidered by many researchers. Evidence of specialized mortuary treatment utilizing marine shell artifacts comes from the cal. A.D. 900 to 1020 component at the Danbury site in northern Ohio. Stable isotope assays document the beginnings of intensive maize consumption combined with a significant increase in aquatic foods. Analyses of human dental calculus provide the first documented evidence for the use of cotton (*Gossypium* spp.) fiber in the eastern Woodlands. Together, these phenomena point to the development of transegalitarian social organization and possible "aggrandizers" within local societies.

**Reed, Charles**

[189] *An Examination of the Implications of Bow and Arrow Technology on Prehistoric Group Size in the Southwestern United States*

I examine the evidence for a correlation between group size and projectile weaponry in the prehispanic US Southwest, focusing on the first-millennium-AD introduction of the bow-and-arrow. In his "Human Uniqueness: A General Theory" (1999) Paul Bingham predicts that improvements in projectile weapons technology should lead to increases in group size, since as the effectiveness of projectile weaponry increases, the risk of punishing defectors from cooperation is reduced, which in turn supports the formation of increasingly large coalitions. I examine several southwestern data series for the proportions of arrow points among the projectiles, against the average or maximum site populations.

**Reed, Karen, Anthony Lopez (SWCA Environmental Consultants) and Caryn Berg (SWCA Environmental Consultants)**

[34] *From the West and the North: Obsidian Sourcing of Artifacts from the Piceance Basin*  
Obsidian artifacts collected from prehistoric archaeological sites in the Piceance Basin of western Colorado were submitted for energy dispersive x-ray fluorescence analysis to determine their geological origins. All recognizable sources were found to be located in the Great Basin and Wyoming. This poster examines the distribution of the sources, in combination with projectile point types, to interpret the movement of people and goods into and out of the Piceance Basin.

**Reed, Karen [34] see Berg, Caryn M.; [34] see Baer, Sarah**

**Reed, Lori (Animas Ceramic Consulting Inc)**

[144] *Connecting the Dots: A Discussion of Ceramic Technology and Design in the Middle and Upper San Juan Regions*

Generally, Basketmaker III and Pueblo I sites of the Upper San Juan region have been archaeologically segregated from the Pueblo II and Pueblo III occupations of Salmon, Aztec, and other large pueblos in the Middle San Juan. Geographically there is significant overlap between the two regions, but evidence of low population density in the early Pueblo II period has been interpreted as abandonment of the Upper San Juan with later repopulation of the Middle San Juan by Chacoan and Mesa Verde people. This paper examines the ceramic evidence for greater cultural connection between these two spatially and temporally defined regions.

**Reed, Paul (Center for Desert Arch.)**

[66] *Salmon Pueblo: Typical Chacoan Outlier or Par for a Reinterpreted Chacoan World?*

In recent years, the orthodox interpretation of Chaco Canyon as a largely empty Pueblo ceremonial center has been questioned. Leading this charge from the north is new research at and an expanded interpretation of Salmon Ruins, long considered a typical Chacoan outlier. Current research at Salmon leaves little doubt that it was built by Chacoan migrants and locally recruited Middle San Juan Puebloan groups as a residential pueblo in the late 11th century, as



the previously dominant Chacoan core began to decline. This evolving view of Salmon has broad implications for our interpretation of the entire Chacoan World.

[144] *see Glowacki, Donna M.*; [144] *see Brown, Gary M.*

**Reeder, Philip [99]** *see Darley, Zaida*

**Rees, Gordon (Brigham Young University), Chris Balzotti (Brigham Young University), and Richard Terry (Brigham Young University)**

[100] *Soil Resources of the Ancient Maya at Tecolote in the Usumacinta River Basin*

The Usumacinta river basin was once home to a flourishing Maya population. For centuries leading up to that civilization's collapse (in the 8th to 9th centuries AD), two major rival kingdoms—Yaxchilán and Piedras Negras—competed for the resources of this basin. The site of Tecolote is thought to lie near the ancient border between these two kingdoms, making the site and the area surrounding it of significant interest in understanding the land-use patterns and agricultural production of the ancient inhabitants. . To evaluate the extent of ancient maize (*Zea mays*) agriculture in the Tecolote area, we examined the stable carbon isotope ratios within soil profiles. Maize, a C4 photosynthetic plant is less discriminatory toward the heavier 13C isotope than the C3 trees and vines that have dominated the forest for the past 1200 years. Residues left by maize cultivation leave a distinct stable carbon isotope ratio signature in soil organic matter that persists for many centuries. Soil profiles from a variety of landforms and at slope positions were characterized, classified, and 12C/ 13C ratios were determined.

**Regensburg, Richard [53]** *see Collins, Antoinette L.*

**Regnier, Amanda (University of Oklahoma), Patrick Livingood (University of Oklahoma) and Scott Hammerstedt (University of Oklahoma)**

[53] *2008 Excavations at the Clement Site (34Mc8), McCurtain County, Oklahoma*

This poster will present the results of the University of Oklahoma's 2008 Field School excavations at the Clement site (34Mc8). Clement is a multi-mound Caddo center located along the Glover River in southeast Oklahoma that was first excavated by a WPA crew under the supervision of David Barreis. We will present a summary of the 1941 excavations as well as report on the recent geophysical survey and excavations into a mound summit, a deep midden area, and overlapping burned structures.

**Reichel, Clemens (Oriental Institute of the University of Chicago)**

[11] *Urbanism, Competition, and Conflict in Northern Syria during the Chalcolithic period (5000 - 3000 B.C.)--a view from Tell Hamoukar*

Recent work in northern Syria and Southern Turkey has shaken the long-held belief that urbanism in the ancient Near East originated exclusively in the plains of Southern Mesopotamia. Based on excavation results at the site of Hamoukar (University of Chicago/Syrian Department of Antiquities) in northeastern Syria this presentation will suggest mechanisms towards urbanism for northern Syria that differ significantly from the "hydraulic elements" traditionally associated with Southern Mesopotamian cities.

**Reid, David [40]** *see Rademaker, Kurt M.*

**Reifschneider, Meredith (University of Arizona)**

[130] *Crop Storage in Northern and Southern Bronze Age Greece*

This paper provides a comparison of agricultural storage practices of ten Late Bronze Age archaeological sites in northern and southern Greece. Formalization of crop storage (specifically grain) may provide clues concerning the role of agriculture at each site and the function of regional economic administration. An analysis of the formality of storage (where formality equals the level of processing and purity of crop samples, their location within formal storage areas or not, and their placement within an architectural structure) can provide details about the amount of labor invested in crop storage and processing and the potential for redistribution.

**Reinhard, Karl, Matthias I. Okoye, Melissa Marotta and Michael Welner**

[28] *Applying Anthropological Data to the Welner Depravity Standard of Depravity*

Forensic anthropology can provide detailed information regarding the treatment of a homicide victim by the perpetrator. These data can be combined with the Welner Depravity Standard (WDS) which is a forensic science inventory to appraise the level of depravity of the specific crime. A case of homicide involving torture and mutilation was reconstructed from skeletal data. The data were then assessed for evidence of depravity using the WDS. Many criteria of depravity

were demonstrated by the osteological data and some were demonstrated not to be present. The case demonstrates how forensic anthropological evidence can contribute to distinctions of a crime's severity.

**Reinhard, Karl J. [28]** *see Wall, Nicole*

**Reinhardt, Eduard (McMaster University), Boyce Farr (Cambridge University), Joe Boyce (McMaster University) and John Robb (Cambridge University)**  
[124] *The underwater topography of Bova Marina, Calabria: geological and remote sensing evidence*

Bova Marina Archaeological Project has conducted an archaeological survey in Calabria, Italy of an area surrounding the San Pasquale River Valley. There are many time gaps in the site distribution for prehistoric periods (approx. Late Neolithic - 6000 yrs BP and earlier) and preliminary geological evidence indicates the record may be biased as sea-level change has submerged a large tract of the coastline which may have contained sites. To address this issue, the research is using a geological approach to reconstruct the changing coastal landscape providing important information for understanding human habitation, maritime trade and subsistence patterns for the area.

**Reitz, Elizabeth (University of Georgia)**

[46] *Diet, Exploitation Strategies, and Economic Contributions at Mission Santa Catalina de Guale*

A long-term study of vertebrate remains from Mission Santa Catalina de Guale (St. Catherines Island, Georgia, U.S.A.) demonstrates that a dichotomy of colonized versus colonizer fails to capture the dynamic interactions at seventeenth-century Spanish Florida missions. Native Americans at Santa Catalina de Guale did not embrace Spanish dietary practices and Spanish foodways were strongly influenced by Native American traditions. These observations diverge from long-held expectations for the influence of colonialism on indigenous and immigrant diets, exploitation strategies, and economic aspirations. This suggests that native knowledge played a dominant role in the formation of local colonial strategies.

**Rempel, Sidney (Arizona State University)**

[145] *Abandonment and Resettlement at the end of the 3rd Millennium B.C. in the Levant: Are Modern Borders Obscuring the Bigger Picture?*

The late 3rd Millennium B.C. in the Southern Levant saw the widespread abandonment or destruction of settlements and a movement towards less sedentary occupation of marginal regions. While this period (Early Bronze IV) represents one of general "collapse", the following Middle Bronze II period demonstrates a resurgence in urban development in this region. Studies of this transition tend to focus on those areas most affected by the phenomenon: Jordan and Israel. The current study uses settlement data from both the southern and northern Levant to describe a more expansive, if different, picture of resettlement processes that crosscuts modern political boundaries.

**Rengifo, Carlos (PUCP), Julio Rucabado Yong (Pontificia Universidad Católica del Perú) and Luis Jaime Castillo Butters (Pontificia Universidad Católica del Perú)**

[15] *When the Agreement is Over: Conflict in Late Transitional Period at San Jose de Moro, Jequetepeque Valley, Peru*

During the what has been called the Late Transitional Period, following the Moche collapse at San Jose de Moro., Cajamarca ceramics gradually became the most prominent mortuary offering in elite burials. However, at the end of this period, elite tombs were systematically destroyed and desecrated, apparently at the hands of the Lambayeque state. This event presents us with one of the clearest signs of cultural clash in the Peruvian north coast. In this paper we discuss the presence of foreign styles at San Jose de Moro, the configuration of Late Transitional cemeteries, the strategies for legitimating territory, and group identity.

**Reussard, Antoine (McMaster University), Erin K. Thornton (Florida Museum of Natural History), Henry P. Schwarcz (McMaster University), Jonathon Malatesta (McMaster University) and Kitty F. Emery (Florida Museum of Natural History)**

[83] *Oxygen Isotopes from Maya Archaeological Deer Remains: Experiments in Tracing Drought using Bones and Teeth*

In the tropics, the oxygen isotopic composition ( $\delta^{18}O$ ) of leaf water is strongly related to precipitation levels and relative humidity. As leaf water ingested by white-tailed deer (*Odocoileus virginianus*) is the major source of oxygen used in the biosynthesis of mineralized tissues, it is

possible to estimate an atmospheric moisture index directly from the  $\delta^{18}O$  measured on bones and teeth from Mesoamerican deer. In this study, a chronological series (from Pre- to Late Classic) of archaeological deer remains from Piedras Negras have been used as paleoclimatic proxy, with the aim of tracking possible humidity levels changes over time.

**Reyes Valdez, Antonio [88]** *see Zavala, Bridget M*

**Reynolds, Cerisa (University of Iowa), Bryan Kendall (University of Iowa) and Thomas Charlton (University of Iowa)**

[53] *A Reevaluation of Early Commercial Food Production in Eastern Iowa*

In 1978, archaeological excavations at the Plum Grove Historic Farm site (located in Iowa City, Iowa) uncovered an extensive bone bed. The bone bed, deposited in the late 19th century, contained the remains of numerous cattle, sheep and pigs. Previous analyses have shown that deposition occurred over a brief time period, indicating that this event was likely not for a single family's subsistence. This project (which included renewed excavations in 2008) investigates the possible market economy associated with these remains in attempts to evaluate the ways in which Euro-American settlers made a living in the late 19th century.

[59] *Discussant*

**Rich, Michelle (Southern Methodist Univ)**

[48] *Refuse or Ritual? An Examination of the Problematic Deposit of Artifacts in the Tomb Fill of Burial 39, El Peru-Waka, Guatemala*

If artifacts often characterized as refuse are discovered in indisputably ritualized settings, do they constitute mundane trash? This on-going conundrum will be examined through the context of the ancient reentry of a Classic-period Maya ruler's tomb at El Peru-Waka'. Located in one of the site's largest temple-pyramids, the chamber was in-filled with vault stones and soil containing several artifact classes which could arguably be components of middens. These artifacts may, however, be remnants of activities directly related to reentry. Ultimately, can we know the difference? The Burial 39 case study will be compared and contrasted with data from other reentered Maya burials.

**Richards, Michael [4]** *see Fuller, Benjamin T.*

**Richards, Michael P. [85]** *see Mannino, Marcello A.*

**Richards, Patricia (Univ of Wisconsin-Milwaukee)**

[163] *A "Map of Milwaukee" The View from the Old Catholic Cemetery Excavations*

Archaeological and osteological analysis of the 25 individuals excavated from the Old Catholic Cemetery of Milwaukee Wisconsin provides a unique view of Milwaukee during the mid-nineteenth century. The frontier nature of the cemetery, the presence of distinct groups coexisting under the umbrella of Catholicism, and the relatively similar health status of all individuals buried in the Old Catholic Cemetery provides a more finely nuanced lens through which to view this period of Milwaukee's history.

**Richards-Rissetto, Heather (University of New Mexico)**

[40] *Studying Social Interaction at the Ancient Maya Site of Copán, Honduras: A Least-Cost Approach to Configurational Analysis*

At the ancient Maya city of Copán, Honduras the distribution and arrangement of elite and commoner households were not the result of haphazard processes. Instead, distinctly Maya social practices influenced where people of particular social classes built their homes, how they built them, and who their neighbors were. To better understand how different groups interacted, a Geographic Information System was developed to carry out a form of configurational analysis that employed least-cost paths. Data from both the natural and built environments were integrated to create an Urban Digital Elevation Model to model the city's layout and study potential social interaction.

**Richman, Jennifer (US Army Corps of Engineers, Northwestern Division) [159]** *Discussant*

**Richter, Kim (UCLA)**

[111] *Contextualizing Huastec Sculptural Styles and Iconographic Themes*

The corpus of well over 450 documented Pre-Columbian sculptures leaves no doubt that this medium was the principal form of Huastec artistic expression. However, most sculptures unfortunately were removed from their original locations in the late nineteenth century without proper documentation of their archaeological context. A careful review of their styles and iconographic themes indicates a degree of internal coherence that defines this sculptural tradition

as one defined by regional convention. Moreover, Huastec sculptures may also be historically contextualized by comparing them to other visual traditions in Mesoamerica which suggests that Huastec artists were in touch with Postclassic artistic currents.

**Richter, Tobias (University College London)**

[184] *Early and middle Epipalaeolithic sites in the Azraq Oasis, Jordan: three seasons of fieldwork at Ayn Qasiyya and AWS 48*

This paper presents a summary of the results of three seasons of fieldwork at the early Epipalaeolithic site of Ayn Qasiyya in the Azraq Oasis of eastern Jordan. With specific reference to geoarchaeology and lithic industries this contribution aims to contextualise the site within the regional settlement sequence and the Epipalaeolithic of southwest Asia as a whole.

**Rick, Torben (Smithsonian Institution)**

[94] *Animal Invasion: Ancient Animal Translocations and Hunter-Gatherers on the California Channel Islands*

Never connected to the adjacent mainland during the Quaternary, the California Channel Islands contain an impoverished terrestrial fauna, consisting primarily of the island fox, the island spotted skunk, a squirrel, mice, and a few reptiles/amphibians. How and when most of these animals colonized the Channel Islands remains unclear, with researchers generally speculating on a natural, human-assisted, or combined dispersal. Recent research suggests that Native Americans probably introduced many of these animals during the Holocene, including the island fox—the largest terrestrial predator on the islands. These data demonstrate the importance of ancient hunter-gatherers in shaping Channel Island ecosystems.

[85] see Willis, Lauren M.; [85] see Fitzpatrick, Scott M; [165] see Braje, Todd J.

**Riddle, Andrew (University of Toronto) and Alexandra Sumner (University of Toronto)**

[49] *Making Tool-Making Tools: A Comparative Technological Analysis of Burin and Burin-Like Tool Production in the Eastern North American Arctic*

Spalled burins and burin-like tools (BLTs) are functional analogues, useful as both gravers and planes for working hard organics. Grinding becomes more common on burins throughout the Pre-Dorset period and ultimately supplants burination as the primary means of working-edge rejuvenation. Burins are replaced in the subsequent Dorset period by fully-ground BLTs. This analysis of working-surface morphologies demonstrates that BLTs have significantly greater rejuvenation and edge-maintenance potential than do spalled burins. The increased production costs accompanying grinding in this context are off-set by a minimization of material waste, flexibility in rejuvenation processes, and an increase in suitable raw material types.

**Rieth, Christina (New York State Museum) and Sean Rafferty (University at Albany, SUNY)**

[116] *Social Complexity and Settlement in the Schoharie Valley, New York*

This paper will examine changes in social complexity as recently observed through archaeological excavations conducted at a multi-component site dating circa 1,500 B.C.-A.D. 1450 in the Schoharie Valley, New York. A discussion of changes in settlement systems at the pre-Contact Pethick site are discussed along with comparative data from nearby sites in the valley. This discussion will address evidence for change and continuity of social organization, exchange economies, and group identity in the region.

**Rieth, Timothy (IARII) and Alex Morrison (IARII)**

[147] *The Mudlane Revisited: Settlement from Kawaihae to Waimea, Hawai'i Island*

The Mudlane Revisited: Settlement from Kawaihae to Waimea, Hawai'i Island Recently, a GIS database has been created documenting archaeological surface features extending from the South Kohala coastline at Kawaihae eight miles inland to the plains of Waimea. These data have been compiled from previous investigations by the Bernice Pauahi Bishop Museum and current research by International Archaeological Research Institute, Inc. Analysis of the distribution of architectural features combined with an updated chronological framework provides an excellent opportunity to examine spatial and diachronic habitation patterns, community interaction, and agricultural changes.

**Riggs, Brett (UNC Research Laboratories of Archaeology) and R.P. Stephen Davis, Jr. (UNC Research Laboratories of Archaeology)**

[14] *"An Excellent Barrier to the Province": Catawba Economic and Political Strategy in the 18th and 19th Centuries*

Recent archaeological evidence from the Catawba Indian village sites of Nassaw (1750–1759), Old Town (1763–1780), and New Town (1781–1818) reveals material aspects of evolving

economic and political strategies that the Catawba Nation devised to manage the effects of the ever-intensifying European presence in the Carolinas. These strategies include multi-ethnic coalescence to bolster population, militarization to ensure essential status to English and Americans, territorial management through treaties and contracts, development of cottage industries, and intensification of seasonal itinerancy to access economic resources. Material evidence indicates the Catawbas' success in applying these strategies to maintain economic and cultural autonomy.

**Riley, Timothy (Palynology Laboratory Texas A&M University)**

[189] *Sampling Coprolites: A statistical evaluation of coprolite sampling techniques*

Coprolites are complex biological specimens that contain multiple lines of dietary evidence. While many studies have utilized this data to reconstruct subsistence, there have been few attempts to evaluate the impact of sampling on this dietary reconstruction. This paper presents a statistical comparison of sampling techniques employed in coprolite studies. Macrobotanical and microbotanical components will be compared across multiple samples of individual specimens. A similar approach has been used successfully in flotation to determine the sample size needed to accurately represent a complete feature. This report will also include preliminary statements on diet breadth in the Lower Pecos.

**Rindel, Diego [139]** see Belardi, Juan Bautista

**Ringberg, Jennifer (University of North Carolina - Chapel Hill)**

[121] *Reconstructing Form, Function, and the Exchange of Pottery at Cerro Leon on the North Coast of Peru*

In this poster I discuss progress made to date on the classification and analysis of pottery collections from Cerro Leon. During five field seasons we excavated two of the site's largest, best-preserved residential compounds. Results indicate that more than half of the currently tallied pottery inventory originates from the sierra above the Moche and Viru Valleys while a smaller proportion consists of lower and middle valley Gallinazo wares. Material composition, form and function, and style are contextualized and compared between the assemblages of the two compounds in order to evaluate possible patterns in foodways, social status, and ethnicity.

[121] *First Chair* [121] *Second Organizer*; [121] see Billman, Brian R.

**Ringle, William (Davidson College)**

[154] *A House in Town: Household Disposition in the Bolonchén District of the Puuc Hills, Yucatán*

This paper presents an analysis of urban household organization derived from settlement studies of both Huntichmul and Kiuic, with particular attention to the disposition of elite households. Recent survey demonstrates the extensive use of hill slopes for craft activities, as well as serving as "natural metaphors" of social rank. The ubiquity of masonry households contrasts sharply with the notion of a limited "inner elite" in archaic states. Patterns common to rural centers are discussed, as are those unique to larger communities.

[68] see Smith, J. Gregory

**Rink, W. (McMaster University) and Kevin Burdette (McMaster University)**

[125] *Optical Luminescence Dating at Wakulla Springs Lodge*

Optical luminescence dating (OSL) of quartz was carried out on 7 samples from the Wakulla Springs Lodge site which is located in Northern Florida in Wakulla County. The single aliquot regeneration protocol was used to determine more than 20 ages for each sample. Tests for incomplete zeroing were carried out on one sample. No evidence for incomplete zeroing was found. The ages range from 15.3 +/- 1.2 ka to 43.4 +/- 3.9 ka. All ages are in stratigraphic order. The implication of the ages is that humans occupied the site earlier than 14.1 ka.

**Rissetto, John (University of New Mexico)**

[130] *Which Way Did They Go? Using Least Cost Path Analysis to Determine Chert Procurement Routes for Late Pleistocene Hunter-Gatherers in Eastern Cantabria (Spain)*

This poster shows how a least cost path analysis was used to determine the most energetically-efficient route between habitation sites and chert sources utilized by Late Pleistocene hunter-gatherers in eastern Cantabria, Spain. Instead of using "as the crow flies", or straight-line measurements, least cost paths were created using a GIS in order to determine the distance and potential travel routes between sites and sources. The results indicate that the least cost paths do not correspond to the straight-line measurements. Ultimately, this technique may help to identify new archaeological sites or chert sources situated along these potential routes.

**Rissolo, Dominique (Waitt Institute) [115] Discussant; [133] see Glover, Jeffrey B.**

**Ristvet, Lauren (University Of Pennsylvania)**

[11] *Performing the State: Ritual, Practice and Politics in Northern Mesopotamia*

This paper will focus on how the elite performance of rituals constructed new political and religious spaces for Northern Mesopotamian states in the Early Bronze Age. It will also explore how the daily practices of many individuals cemented these realities. Political elites transformed sacred space within the city--by erecting tombs, palaces, and temples-- and beyond the city--by establishing pilgrimage centers at Banat, Gre Virike, Jebelet al-Beda, and Khazna. These ritual journeys combined with the practical journeys undertaken by soldiers, messengers and nomads worked to create the "imagined community" of individual states, while affirming a larger Northern Mesopotamian oecumene.

**Rittweger, Holger [138] see Stobbe, Astrid**

**Rivera Casanovas, Claudia [45] see Capriles, Jose M.**

**Rizvi, Uzma (Stanford University) [21] Second Organizer; [21] see Abraham, Shinu A.**

**Roache-Fedchenko, Amy**

[163] *18th Century Metallurgical Investigation of Blacksmithing at Fort Michilimackinac*

Metal artifacts are often neglected in archaeological analysis, sometimes categorized as small finds, other times placed within the generic category of 'metal'. In utilizing previous excavations and reports, along with original analysis, this research will examine how metallurgical analysis of various classes of metal artifacts can tell us about the socio-economic role of the blacksmith within fur trade communities. Artifacts associated with the household and trapping or hunting activities will be sampled in order to better understand the interactions of the blacksmith and various community members in terms of repair, manufacture and consumption of metal objects at Fort Michilimackinac.

**Robb, John (Cambridge University)**

[177] *Huron captive torture as embodied violence: the collision of Native American and European ontologies*

This paper contextualizes Huron warfare and captive torture in terms of the practical logic of the body. Practices such as the ritualized torture of captives were incomprehensible to 17-th century European observers, yet they formed part of an array of bodily practices (self-presentation, eating, cleanliness, human-animal boundaries, dancing, healing and the expression of emotions and identity) which together enacted a coherent native ontology about the nature of the body. Jesuit observers' commentary on these practices reveals the gap in understanding each culture had of the other.

[124] see Reinhardt, Eduard G; [124] see Wolff, Nicholas P.; [187] Discussant

**Robbins, John (Huffington Department of Earth Sciences)**

[41] *Stable isotopes and marine temperatures from CA-SRI-147 (ca. 7300 to 350 CYBP)*

On the Northern Channel Islands, California, ocean temperatures have been inferred from oxygen isotope ratios of marine shells from short-term occupation sites (e.g., Kennett, 1998; Robbins, 2007). While useful, these data provide little information on long-term climate change. Samples from CA-SRI-147 (ca. 7,300 to 350 CYBP) on Santa Rosa Island provide a climate record comparable to others (see Kennett, 2005). Preliminary results suggest average temperatures from ca. 7,300 to 5,600 CYBP (~13.5 °C) resemble modern values (~14.5 °C). Similar to the Santa Barbara Basin sediment core (Kennett, 2005), temperatures ca. 7,300 CYBP were warmer than today and dropped ~2 °C by 6,000 CYBP.

**Roberts, Andrew (Texas A&M University)**

[88] *Indianola: The Sunken City of Texas*

This poster presents preliminary data concerning the archaeological potential of the port city of Indianola, Texas. Indianola was founded in 1844 by German immigrants and over the next two decades, quickly developed into a thriving port. In 1875, a hurricane demolished most of the city. A second hurricane devastated the town again in 1886, driving the remaining inhabitants inland. Today this area is largely unpopulated. This poster incorporates historic maps, magnetometer data and modern maps to identify potential areas for an archaeological investigation.

**Roberts, Christopher (Arizona State University)**

[61] *Hopi Oral Traditions and the Anglo Saxon Migration: serial migration in the European Early Medieval Period*

Recent approaches to the archaeology of migration in the U.S. Southwest could provide fresh perspectives to those current in the scholarship of the Early Medieval Period in Europe. Specifically I plan to examine recent trends that suggest migrations in the Southwest occurred as ongoing processes at very small scales and contrast these to the idea of the Anglo-Saxon migration as being a finite and large scale event. Similarities in the way both the Ancestral Pueblo peoples and the Ancient Germanic peoples organized their social groups suggest such an approach might be fruitful.

[61] *Second Organizer*

**Roberts, Erika (University of Florida)**

[163] *Making Memories: The Archaeological and Historical Production of Kingsley Plantation (1814-1840), Fort George Island, Florida*

Kingsley Plantation, considered by many to be the birthplace of the archaeology of African-American lifeways, manifests a complex history and archaeology. Most of the history focuses on Scottish planter Zephaniah Kingsley and his African wife Anna, instead of the other owners or numerous enslaved peoples. Rather than examining this location as a set of specific historical events, this paper explores how these histories are manipulated and constructed. Through the combination of the archaeological data, historical documentation, historical interpretation, and living memory, Kingsley Plantation presents an ideal case study where varied histories intersect and create the current memory of this locale.

**Roberts, Kathryn**

[145] *The Footprint of Empire: Evidence of the Macedonian Empire in Central Asia*

This study explores effects of imperial control and how it manifests itself in the archaeological record. The Macedonian Empire, led by Alexander the Great, occupied regions of India, Pakistan and Afghanistan in the late 4th century BC. To determine the imperial imprint left behind, evidence is found in the material and written record. Ancient sources such as Herodotus and Arrian provide an image of India and Bactria. Coins, statues and other pieces provide the material proof. The evolution of this region under Macedonian rule and how the local and imperial cultures were able to merge can be seen.

**Roberts, Theodore (SWCA Environmental Consultants)**

[189] *Archaic Period Obsidian Procurement in the Northern Southwest*

Hunter-gatherer lithic procurement is investigated through a study of obsidian source use. X-ray Fluorescence analysis was performed on 271 Archaic Period projectile points recovered as surface finds in Northern Arizona. Thirteen obsidian and fine-grained volcanic (FGV) toolstone sources were analyzed and used to build upon regionally specific source standards. The geochemical analysis revealed highly patterned and selective obsidian procurement behavior. To investigate such behavior, I adapted a model used to explain the overwhelming reliance on only a handful of the lithic options available within the research area.

**Robertshaw, Peter [168]** *see Fenn, Thomas*

**Robertson, Ian (Stanford University)**

[86] *Grappling with the internal configuration of an early metropolis: Teotihuacan, Mexico*

Extensive archaeological data collected by the Teotihuacan Mapping Project (TMP) provide an unusual opportunity for examining the internal organization of an ancient city across space and time. This paper uses TMP data to contrast large-scale planning carried out at high levels with the more emergent effects of decisions and actions carried out at the level of individual residential groups and expressed mostly within encompassing neighbourhoods. Interplay between bottom-up and top-down processes underlay some of the most salient features of the social landscape of Teotihuacan and may have had important, if unintended, effects on the city's trajectory of growth and decline.

**Robertson, J. David [49]** *see Coleman, Magen E.*

**Robinson, Brian (University of Maine)**

[116] *Cultural Organization in the Far Northeast and the Northeast*

This symposium, with its broad approach to complexity, explores organizational characteristics of

Northeast North America, positioning the area in terms of anthropological classifications and neighboring regions. What visible factors are recognizable and what insights are to be gained from them? The Northeast has highly visible boundaries throughout the Archaic period, involving both technology and ritual, providing a focus for investigating identity. Indeed Far Northeast archaeologists have seceded from the broader region to some degree because we have different sets of problems. Here the focus is the on the proposed boundaries and what they tell us about cultural organization.

**Robinson, Eugenia (Montgomery College)**

[109] *Social Identities through the Millennia at La Casa de las Golondrinas, Guatemala*  
La Casa de las Golondrinas, the largest rock art site in the Guatemalan highlands, is situated in the Antigua Valley, and has evidence of human activity for 5,500 years. This paper will present a synthesis of the archaeological, linguistic and ethnographic data that relate to the ethnic groups of the region through this long time period. In spite of changes in valley-wide populations, sociopolitical organizations, and cultural identity this place with natural sacred features has been a portal for ritual for both prehistoric and modern people for millennia.

**Robinson, Kenneth [174]** see May, J. Alan

**Roby, John (Binghamton University)**

[163] *Time, practice and process at the Dennis Farm site*  
The Dennis Farm complex -- an agricultural property in Northeastern Pennsylvania established by free African American settlers in the late 18th/early 19th century and retained by the descendants of that family to the present -- presents a potentially unique opportunity to examine a number of topics of archaeological and historical interest. In this report on the first of two seasons of archaeological investigation, initial findings relating to site chronology, depositional practices, genealogies of household production and consumption, and land use are presented and evaluated.

**Roca de Togores, Consuelo [130]** see McClure, Sarah B.

**Rockmore, Matthew (Pennsylvania State University)**

[185] *The Terminal Classic Maya and Analogies with Somalia: an Archaeological Assessment of Stateless Transitions*

In recent years, analogies between Somalia and the Maya Terminal Classic "Collapse" have come into vogue. Since the 1990's, the former Somali state has largely devolved into a variably stable stateless society. This paper is intended as an assessment of the utility of this analogy for archaeological interpretation in the Southern Maya Lowlands, drawing particular examples from the Central Petén Lakes district. It includes analysis of the points of similarity and differences between the two cases, focusing on the archaeological correlates of the political situation as currently understood, ranging from settlement pattern to social structure and subsistence.

**Rodas S., Dennise [12]** see Couture, Nicole C.

**Rodning, Christopher (Tulane University), David Moore (Warren Wilson College) and Robin Beck (University of Oklahoma)**

[171] *Spanish Contact and Conflict with Native Peoples of the Southeastern United States*  
During the sixteenth century, encounters between Native Americans in the Southeast and Spanish explorers and colonists were often characterized by conflict, including conflicts at first contact, and conflicts that developed during more prolonged interactions. In several instances, native people mounted carefully coordinated attacks on Spanish groups. This paper compares several cases of conflict between native groups and Spanish expeditions led by Juan Ponce de León, Pánfilo de Narváez, Hernando de Soto, and Juan Pardo. We consider the reasons why Spanish expeditions into the interior of La Florida repeatedly failed, and why the native communities they encountered acted as they did.

**Rodriguez, Enrique (University of Texas)**

[166] *On Ideologies, Orientalism, and Technological Change in Colonial Mexico*  
Anthropologists have sometimes cited cultural beliefs and ideologies to explain the continued use of stone tools among indigenous people long after being presented with European technologies (such as steel knives and grinding mills). While cultural relativism is an important concept, it also runs the risk of Orientalizing indigenous people or making them seem irrational in contrast to Western "rational" and "technologically-advanced" societies. Drawing from Brumfiel's work on



ideologies and political economy, I examine the factors in the political economy of colonial Mexico that supported ideologies and cultural beliefs that made indigenous technologies continue long after European colonization.

[166] *Second Chair*

**Rodriguez, Erin (University of Pittsburgh)**

[191] *Obsidian Access in Pambamarca*

Pambamarca is located in the vicinity of multiple obsidian sources, however, it is unlikely that any of the Pambamarca sites were in direct control of the primary sources. Therefore access to obsidian in the area would be dependent on the changing political and economic situation of the wider region. This paper looks at obsidian access and usage through time in the Pambamarca region, starting in the unrestricted Early Cayambe period and ending in the very restricted Colonial period. The analysis also identifies differences in obsidian access and usage between contemporary Inka and Cayambe sites.

**Rodriguez, Maria del Carmen [148]** *see Stoner, Wesley D.*

**Rodríguez, Agustín [67]** *see Guillen, Sonia E.*

**Rodríguez López, Isabel [20]** *see Borejsza, Aleksander*

**Rodriguez Ramos, Miguel [172]** *see Rodriguez Ramos, Reniel*

**Rodriguez Ramos, Reniel, Jaime Pagán Jiménez (EK, Consultores en Arqueología), Marínés Colón (Programa de Arqueología, Instituto de Cultura Puertorriqueña) and Miguel Rodríguez Ramos (Universidad de Puerto Rico-Utuado)**

[172] *A Crude Awakening: The Case of Jácanas*

The compliance-driven archaeological excavations conducted at Jácanas have brought to the surface some of the major issues faced in the management and protection of Puerto Rico's historical heritage. This case clearly reflects the legal limitations that we Puerto Ricans have to safeguard our cultural patrimony in federally regulated undertakings resulting from our colonial situation, as well as the colonialist templates by which some of those archaeological interventions in the island are structured. In this presentation, we focus on the deficient methodological protocols, ethical violations, and overall low archaeological standards observed in said work, which serve as a graphic metaphor of the problems inherent in the performance of archaeology in colonial settings.

**Rodríguez Rodríguez, Amelia [49]** *see Iñáñez, Javier G.*

**Rodríguez-Pérez, Mónica [192]** *see Tiesler, Vera G.*

**Roe, Peter G. [109]** *see Hayward, Michele H.*

**Rogers, Anastasia [29]** *see Amick, Daniel S.*

**Rogers, J (Smithsonian Institution), Maciej Latek (George Mason University) and William Honeychurch (Yale University)**

[16] *Simulating Pastoralist Settlement Systems in Inner Asia*

This study explores key issues in nomadic pastoralist settlement systems in Inner Asia as they developed following the Bronze Age. Archaeological and historical sources provide evidence for a resilient, but highly volatile adaptation capable of supplying the social and economic foundations of extensive empires. Typically, mobile pastoralists leave little evidence of domestic activities, making it difficult to identify variation in landscape use. In this study we use the agent-based model HouseholdWorld, developed at George Mason University to simulate key aspects of mobility, population density, kinship structures, and herd dynamics to explore competing interpretations developed from recent archaeological field survey.

**Rogoff, David (UPenn)**

[114] *Community Form and Structure within the Late and Terminal Classic Middle Chamelecon Drainage, Northwest Honduras*

Survey within the middle Chamelecon drainage revealed a spatially extensive community divided among three hierarchically structured tiers ultimately dominated by elites ruling from the primate center of Las Canoas. Excavations conducted in a sample of sites scattered over the basin reveals a complex set of interrelations among people residing at settlements of varied sizes and

locations. This paper focuses on the ways in which processes of hierarchy and heterarchy played out through the actions of agents seeking to employ economic resources, including pottery production, to advance and resist concentration of power.

**Roler Durand, Kathy (Eastern New Mexico Univ) and Stephen R. Durand (Eastern New Mexico University)**

[66] *Tracing Chacoan Migration using Discrete Dental Traits*

Migration processes have played an important role in the prehistory of the northern Southwest, yet evidence of migration can be difficult to glean from the material culture record. Using discrete dental traits, we estimate genetic distances as evidence of migration in the Chaco region. First, we evaluate whether Great House inhabitants within Chaco Canyon and the Great House of Pueblo Bonito migrated from one or many regions in the northern Southwest. Second, we explore the relationship between Great House inhabitants in the Middle San Juan Region and those in Chaco Canyon, as well as their relationship to their surrounding communities.

**Rolland, Vicki and Keith H. Ashley (University of North Florida)**

[142] *Where's the Corn in Peninsula Pre-Columbian Florida?*

The earliest French and Spanish accounts speak of intensive maize farming among the Timucua of northern peninsular and Atlantic coastal Florida. Many researchers have used historical documents and the presence of a maize-based economy among Mississippian communities to push back the advent of corn production in peninsular Florida a half-millennia or more prior to European contact. Present evidence in northeastern Florida suggests that maize cultivation was added to their fishing-shellfishing way of life no more than a century before French arrival in 1562. This paper reviews archaeological and documentary evidence on maize cultivation in peninsular Florida.

**Romano, Francisco (University Of Pittsburgh)**

[65] *Household Social Composition and Community Nature Compared: The cases of Muisca (Colombia), Alto Magdalena (Colombia), and Marajora (Brazil) Chiefdoms*

Variations in supralocal community formation were present in several prehistoric societies. The main purpose of this paper is to explore the social composition over time in smaller social units (households) and its link to the formation of communities, both used to contribute to our knowledge about demographic changes and social interaction. Three trajectories of chiefdom development were considered: the Muisca (Colombia), the Alto Magdalena (Colombia), and the Marajoara (Brazil). Two aspects made up the nature of the social composition, the number of members per social unit, and its relation to possible structure units.

**Rood, Ronald [188] see Eskenazi, Phoebe Bryna**

**Roos, Christopher (The Ohio State University) and Kacy L. Hollenback (University of Arizona)**

[189] *Compromise at Home: Behavioral Ecology and Gendered Dialogs in Autonomous Households*

In mixed economy hunter-gatherer-gardener societies, the increasing economic importance of women's labor may have been parleyed into a greater role in decision-making within autonomous households. Decisions regarding land use strategies, mobility, economy, and technology are fluid and constantly renegotiated between male and female decision-makers. In this paper, we explore the implications of male and female provisioning goals derived from Human Behavioral Ecology for understanding temporal and spatial variation in the archaeological record of the Mogollon Pithouse Period (AD 200-1000) and protohistoric Northern Plains Village (AD 1400-1800) societies.

**Roosevelt, Anna (Univ. Illinois, Chicago)**

[47] *The Potential of Southern Baja California in the Peopling of the Americas*

As the Ice Age ended this region on the coastal route from the Bering Straits had a unique resource mix: sun and warm temperatures, higher rainfall than today, deep-water fisheries, lagoons, rugged calcareous and volcanic terrain, and diverse vegetation. Like some Patagonians, Southern Baja indigenous groups have been linked genetically with Paleoarchaic populations. Compelling traces of a distinctive, early archaeological occupation merit further investigation. Only a few have been sampled, but one site dates to the beginning of the Holocene. Smoky caves and black-sand middens lie near beaches, lagoons, and gravely floodplains. In the middens are fishbone, shells, carbonized plants, hammerstones, large turtle-back scrapers, and triangular, stemmed projectile point fragments. A half-hour inland, there are extensive lithic

scatters at sheltered quebradas. The stemmed, triangular projectile points, oblong bifacial preforms, and debitage of all stages were made on hyaline quartz crystal and grey and brown chalcedony. On a nearby hill is a rock shelter decorated with a distinctive style of red and yellow finger painting representing a starry sky, clouds, and rain.

[47] *Discussant*

**Rosania, Corinne (MU Research Reactor), Alex W. Barker (University of Missouri, Columbia) and Michael D. Glascock (MU Research Reactor)**

[130] *Bronze Age Obsidian Procurement in Peșica Santul Mare, Romania*

Obsidian artifacts can provide unique insight into an array of anthropological questions, such as subsistence and trade, but studies of Bronze Age communities have traditionally focused on the circulation of metals and ceramics. This study compliments such analyses by examining obsidian procurement patterns of the Maros Culture. Obsidian artifacts from Peșica ³anpul Mare, a Middle Age Maros Culture site in Western Romania, are analyzed by non-destructive X-ray fluorescence and neutron activation analysis in order to determine their original source. Chemical characterizations of artifacts are compared to previous obsidian data from the region to elucidate procurement patterns of the Maros Culture.

**Rosen, Steven (Ben-Gurion University)**

[16] *The Development of Pastoral Tribes in the Desert: a Case Study from the Negev*

The diffusion of the domestic goats into Neolithic desert hunter-gatherer societies of the southern Levant engendered fundamental changes in subsistence, social organization, and ideology, beginning in the 7th millennium BC. These changes ultimately crystallized in a package including increased territoriality, elaborate cult and cosmology, and larger and hierarchical social units - the rise of desert tribes. In some contrast with the earlier agricultural revolution in the settled regions of the Near East, the adoption of herding precedes the social/ideological developments by roughly 500 years, suggesting that changes in social fabric were adaptations to the demands of the new subsistence system.

**Rosenstein, Dana (University of Arizona), David Killick (University of Arizona) and Edwin Wilmsen (University of Texas at Austin)**

[145] *Hunter-gatherers, pastoralists and agriculturalist interactions in Botswana, 100 - 1600 CE: a sociopetrographic study*

For more than 30 years, Africanist archaeologists have debated the extent of hunter-gatherer, pastoralist and agriculturalist interactions across the Kalahari desert in the Early and Late Iron Age periods (100 - 1600 CE). This is the first large-scale archaeological and ethnographic project to investigate the technological, social, political and economic implications of the movement of people in precolonial Botswana. We analyzed over 300 archaeological and ethnographic potsherds, and compared them to over 75 clay samples. The associations between these groups were long-term, as evidenced by the ceramic characterization, and likely were driven by access to natural resources.

**Rosenstock, Eva [95] see Biehl, Peter F.**

**Rossen, Jack**

[9] *Archaeology, Tourism, and Intrigue at the Levanna Site, Central New York, 1924-2008*

The Levanna Site in Cayuga County, central New York is being reinvestigated for the first time since the 1930s. This "Owasco" site has had a long colorful history as a research locale and tourist attraction. In particular, the nature of 1930s archaeology and archaeological tourism is highlighted by this site, including the complex interactions between Native Americans, professionals, avocational archaeologists, and local citizens. This site also highlights the debate between in-migration and in-situ hypotheses of the origins of Haudenosaunee (Iroquois)

**Rost, Stephanie**

[11] *Investigation of a modern irrigation system under archaeological considerations*

Archaeological studies on ancient irrigation are mainly based on the interpretation of settlement patterns and satellite imagery. Due to insufficient data, an understanding of how ancient irrigation systems were designed beyond the primary canals is still lacking. Little ethnographic data are available to inform archaeological interpretations. This study investigates how factors like demography, patterns of landownership and agricultural and economic conditions impact the spatial organization of the irrigation system studied by Poyck in the 1960s and its associated settlement system. The result of this study shall inform future archaeological research on Mesopotamian irrigation.

**Rothenberg, Kara (University of South Florida) and E. Christian Wells (University of South Florida)**

[175] *Soilscape Legacies of the Palmarejo Valley, Northwestern Honduras*

We draw on geoarchaeological and pedological research in the Palmarejo Valley of northwestern Honduras to explore the ways in which historical and emerging human impacts to soilscape influence modern land use practices. This work uses physical and chemical analyses of soils and sediments to evaluate environmental conditions before, during, and after the late prehispanic occupation of the area all the way up to the present. We are interested to learn whether the prehispanic abandonment of this region was associated with human-induced soil erosion and the extent to which such processes altered the soilscape for succeeding generations of farmers.

**Rothschild, Nan (Barnard, Columbia Unvers)**

[141] *Corpses and Ghosts: The African Burial Ground*

The bodies of the dead are especially significant actors and their treatment is encompassed within aspects of iconoclasm, handled with respect or transgressed and degraded at differing times in their trajectory. As their reality fades their power may increase. The African Burial Ground in lower Manhattan, NYC is an exemplar of such conflicting representations. In the 18th c. dead Africans were buried carefully; in the 19th c the cemetery was built over, forgotten and disrespected. Late in the 20th c, these bodies were relocated and had become ghosts, subjected to wildly divergent attitudes and behaviors by a Federal agency, the African-American community/communities and archaeologists.

**Roumpou, Maria [74] see Margomenou, Despina****Rouse, Lynne (Wash U in St. Louis) and Michael Frachetti (Washington University in St. Louis)**

[16] *Consolidation and Fragmentation of Nomadic Political Landscapes: Archaeological Evidence from Inner Asia*

A key index for understanding the development of political landscapes is the extension of territory under the control of political units. This index is inherently difficult to ascertain in the case of Nomadic societies, largely due to the fragmentary or "non-uniform" nature of their political institutions. This paper traces the fluctuation of territorial expansion from the middle Bronze Age to the early Iron Age in the Semirech'ye region of southeastern Kazakhstan, specifically in the newly surveyed Ush-Kara desert region, outlining the political economy and chronology associated with dynamic structures of social and political organization among mobile pastoralists of Inner Asia.

**Rowe, Marvin [30] see Armitage, Ruth Ann****Rowe, Robert (Environmental Planning Group (EPG))**

[189] *The Salt Trade in the Prehistoric American Southwest*

Salt is a biological necessity of human life. In prehistoric times, the lack of salt could drastically affect the health of entire populations. Trade in salt was very important, but very difficult to see in the archaeological record. The areas that didn't have salt needed it and the areas had the salt had a lucrative trade source. Most salt can be obtained by collecting it from natural deposits; however, the location on salt flats of large-shallow ceramic vessels in the American Southwest suggests that salt was purposely being produced, and through impurities, can be traced along the invisible trade routes.

**Rowe, Sarah (University of Illinois)**

[65] *Politicized Identity in the Manteño Society of Coastal Ecuador*

Building on a theory of community politicization and materialized practice (e.g., Pauketat 2000), this paper examines the development of community identities in the Manteño society on the coast of Ecuador during the Integration Period (A.D. 800-1532). The trait-list approach previously used by archaeologists to examine coastal identity (e.g., Estrada 1957) has had limited success and a reassessment is necessary. I use ethnohistoric accounts and archaeological evidence to examine the politicization of communities and development of regional identities on the coast, and discuss this evidence in light of my on-going work at the site of Dos Mangas.

**Roza, Jennifer (University of Chicago), Kathleen D. Morrison (University of Chicago) and Mark T. Lycett (University of Chicago)**

[18] *Colonial Transformations and Spatial Practice: Micro-Scale Spatial Analysis of Pollen from a Seventeenth-century Field House*

The investigation of Pueblo field systems during the Spanish colonial period provides a unique view of the confluence of Spanish technologies and foreign biota with local land use practices and socioeconomic systems. This poster explores the changing uses of plant resources and spatial practices through the analysis of pollen collected from a seventeenth century field house with evidence of multiple reconstruction episodes. Findings at this site are significant, as they document one of the few excavated field houses for this period, and represent field activities most likely associated with the Pueblo village of Paa-ko, or LA 162, located to the northwest.

**Rozwadowski, Andrzej (Poznan University)**

[109] *Entering the rock? Culture specifics and universals in shamanistic rock art in Siberia.*

As shamanism is a concept used cross-culturally, frequently applied also in rock art studies, it is interesting and crucial to look at how it is understood in "terra mater" of shamanism and what are the relationships between shamanism and rock art in Siberia. Confronting different models of shamanism the paper looks at this phenomenon from the perspective of local cultural tradition, considering the ways of identifying shamanic iconography in historic and prehistoric rock art in Siberia (basing on recent research done in south Siberia, Altai and Minusinsk Basin). Besides evident cultural specifics, surprising interpretative parallels with metaphoric model, first conceived in Africa and then developed in America, are presented.

**Rubin de Rubin, Julio Cezar [139]** see *Silva, Rosicler T.*

**Ruby, Bret (US Army, Fort Lewis)**

[17] *Vikings, Vitrified Forts, and the Archaeology of Spruce Hill, Ross County, Ohio*

Throughout his distinguished career, Chris Peebles has promoted exchanges of method and theory between the Old World and the New World. Since the early 19th century, trans-Atlantic exchanges have played a key role in explaining the enigmatic stone walls and concentrations of intensely burned rock and soil atop Spruce Hill. Until recently, Spruce Hill was seen in popular imagination as a Viking stronghold and iron works. New investigations point instead to an Ohio Hopewell origin. Ironically, analogy to Scotland's "vitrified forts" provides perhaps the best explanation for the intense burning associated with many southern Ohio hilltop enclosures.

**Rucabado-Yong, Julio**

[15] *Conflict, Negotiation and the Construction of Moche Identity(ies): A View from Moche Iconography*

Conflict and negotiation between coastal and upper valley/highland communities in the Peruvian north coast characterizes the process of state formation and the construction of a "Moche identity". New "Moche" elites manipulated visual media and ritual performance creating an ideological discourse where interethnic conflict and negotiation were not only expressed through "warfare," "ritual battle" and supernatural confrontation scenes in ceramic vessels, murals and other supports, but also inscribed and enacted in elite burials and public rituals in temples. This paper presents an iconographic analysis of Moche art as a complementary source of information for archaeological interpretations of scenarios of social interaction.

[15] see *Rengifo, Carlos Enrique*; [15] see *Castillo-Butters, Luis Jaime*

**Rudolph, Katie (UW- Milwaukee)**

[23] *Mortuary Variability at the Aztalan site (47JE1), Jefferson County, WI*

Aztalan is a fortified Middle Mississippian/Late Woodland (AD 1100-1300) site located on the Crawfish River in Jefferson County, Wisconsin. Treatment of human remains at the site is varied and includes elaborate conical mound burial, cremation in a charnel structure and processed human remains in the midden. A thorough taphonomic analysis was conducted to investigate correlations between age, sex, provenience and types of processing. The results are interpreted through the site's overall cultural context and include a brief discussion of the implications of cannibalism and violence that have stigmatized the site for over a century.

**Rugroden, Sara (University of North Florida)**

[32] *Liminal Spaces at the Prehistoric Site of Paquime, Chihuahua, Mexico.*

In 1909, Arnold van Gennep outlined the tripartite structure of particular rituals he referred to as Rites of Passage. The middle stage of these rites he called the liminal phase. The concept of liminality, later expanded upon by Victor Turner, applies not only to temporal periods within rituals

but also to physical spaces. This poster examines ritual architecture at Paquime during the Medio period with the aim of identifying liminal spaces at this complex prehistoric community. Specifically, I compare architectural spaces that are contiguous with previously identified ritual spaces with hypothesized characteristics of liminal spaces.

**Ruiz, Joaquin [168]** *see* Thibodeau, Alyson M.

**Rumold, Claudia [30]** *see* Haas, Wm. Randall

**Runggaldier, Astrid (Boston University) and William A. Saturno (Boston University)**  
[192] *Monumental Architecture: Building Design and Commemoration at San Bartolo, Guatemala*  
The tradition of building architecture on a monumental scale is one of the aspects that set Preclassic Maya Lowland culture on the path to statehood. San Bartolo exemplifies this early tradition in the Central Lowlands, and demonstrates that the meaning of monumental architecture transcended the power of single structures. Entire groups, formally designed in the Middle and Late Preclassic periods, designated site areas for different uses in ways that had long-term effects throughout San Bartolo's Late Classic reoccupation. Beyond size, monumental architecture functioned as the very meaning of the word monument—a place for people to share and to commemorate events.

**Rush, Laurie (US Army, Fort Drum)**

[72] *Heritage Training for US Military Personnel - An Update*

Since 2006, the Department of Defense has been working to address the issue of inadvertent damage to archaeological sites and cultural property during global operations. Accomplishments include addition of heritage data to command environmental GIS, development of awareness materials like the playing cards, incorporation of archaeological expertise into coalition exercise planning, development of training and reference materials, and establishment of subject matter expertise partnerships. Heritage professionals working with DoD have demonstrated that addressing heritage issues has clear benefits for all involved in conflict situations. Establishment of a permanent DoD heritage management program for global operations is recommended.

[72] *First Chair*

**Russo, Michael (Southeast Archeological Center)**

[165] *The Rise and Fall—and Rise and Fall—of Shell-Ring and Shell-Mound Architecture in the Southeast U.S.*

Shell rings were built by at least eight distinctive cultures along southeastern U.S. coasts between 4600 and 3500 BP. Around 3800 BP, shell ring construction began winding down, disappearing with other large-scale shell mounding within a few centuries. When large-scale shell mounding reemerged two millennia later, mounds had changed from simple refuse piles and ring monuments to a wider variety of forms with varied functions (e.g., infrastructural, sepulchral, and hierarchal). Changes in sea-level rise seem to have universally been a major catalyst for this cycling in mound construction, although the forms and functions mounds took were linked to local social trajectories.

**Rust, William (Athena Review)**

[149] *Olmec settlement evidence at La Venta*

Bob Sharer has been at the forefront on questions involving large scale socio-political developments in Preclassic Mesoamerica. Under his direction, I conducted research at the Olmec center of La Venta, Tabasco in 1986-7. This research yielded evidence on Preclassic village sites at the main center and along nearby river channels. Ranging from ca. 3100-350 BC, some settlements predate La Venta as a regional center, while others belong to a three-tier settlement hierarchy dating to La Venta's apogee, ca. 900-400 BC. Analysis of pottery motifs, figurines, and ceremonial items has revealed strong influences from both the Gulf Coast and central Mexico.

**Ruth, Susan (University of New Mexico)**

[18] *Technological Organization at the Rio Rancho Folsom Site*

The Rio Rancho Folsom site is located in north-central New Mexico, northwest of Albuquerque. One of the densest Folsom sites in the central Rio Grande Valley, Rio Rancho contains a wide array of material types including Pedernal chalcedony, Chuska chert, Jemez obsidian, and Zuni-Spotted chert. The artifact assemblage includes projectile points, channel flakes, performs, endscrapers, debitage, and other tools. This research examines the material type distribution across artifact classes as well as the debitage assemblage to determine whether different technological strategies were supply different tool types with raw material.

**Ruttle, April (Simon Fraser University)**

[118] *Representations of Children in Northwest Coast Archaeology*

Depictions of ancient life, particularly in popular literature, have a profound effect on the public imagination — often accepted as “true” representations of the past. Therefore it is crucial that archaeological interpretations of the past be both inclusive and representative. Children were a significant part of past populations; to overlook them in our analysis is to risk losing much important information. Reviewing available research, I explore the degree to which children are accounted for in Northwest Coast archaeological literature — both written and visual reconstructions — thus demonstrating the need for increased attention on the presence and roles of children there.

**Ryan, Kathleen (U of Pennsylvania Museum)**

[16] *Present and Past: People, places, and pasture in East African prehistory*

The pastoral economy of the modern Maasai is intimately integrated with grazing rights, boundaries, and social organization. Our archaeological investigations on the Laikipia plateau, Kenya have identified many prehistoric settlements which appear to be base-camps for pastoral groups. Once an adequate chronology is established, we hope to assess the long-term organization and stability of prehistoric pastoralism in this area, using the modern Maasai as a provisional model.

**Ryan, Susan (Crow Canyon Archaeological Center)**

[164] *Environmental Change, Population Movement, and the Post-Chaco Transition at Albert Porter Pueblo*

Relatively little attention has been paid to the impacts of the A.D. 1130-1180 drought in the central Mesa Verde region, despite the fact that this period coincides with the collapse of the Chaco regional system. Two questions are posed in this paper: were great house communities depopulated during the A.D. 1130-1180 drought, and did people migrate from the central Mesa Verde region during this period? This paper calls into question the use of tree-ring distributions as the sole means of recreating population history, and offers an alternative approach utilizing multiple lines of excavation evidence, as applied at Albert Porter Pueblo.

[40] see *White, Devin A.*

**Sabloff, Jeremy (University of Pennsylvania) [137] Discussant****Sabo III, George**

[109] *The Ethnobiology of Rock Art in the Arkansas Ozarks*

Animals and plants, some identifiable at the genus or species level, are occasional subjects of Arkansas Ozarks rock art. This paper explores three representational aspects of these images. First, the images offer glimpses of ancient environmental features as seen through the artist's eye. Second, comparison of these images with other ethnobiological datasets—particularly animal and plant remains preserved in archeological contexts—informs us about cultural themes associated with ancient economic patterns. Finally, analysis of regional motif distributions provides insights concerning the manner in which pre-contact Indian communities transformed their natural surroundings to create cultural landscapes imprinted with identities and beliefs.

**Sabom Bruchez, Margaret, Elizabeth I. Louden (Texas Tech University) and Joel Gordon**

[134] *Painted Indian Cave (41BC1), Blanco County, Texas: A Study in 3D Cultural Visualization and Acoustic Mapping*

In April 2008, interior and exterior surface features of Painted Indian Cave (41BC1) in Blanco County, Texas were laser mapped and color photographed; existing sounds were recorded. A digital, three dimensional, sound-enhanced simulation of the underground environment was produced. Mapped were complex reverberations of nearby waterfalls in context with solid red monochrome pictographs of supernaturals, geometrics, and bison. Dated to 770± 50 years BP (Brock et al. 2006), the art corresponded with the time of the reentry of bison into the Southern Plains of Texas, during the Late Prehistoric. The investigation was important for several reasons. Documenting the natural sounds in this undisturbed context aids in our understanding of how aural phenomena may have influenced and affected ancient site use. The simulated environment can be virtually visited and studied, protecting the cave's fragile resources from further damage and deterioration. The method shows promise in fields of resource analysis, monitoring, management, litigation, scientific experimentation, and education.

**Sack, Robert [113] Discussant**

**Safi, Kristin (Washington State University), Carl Lipo (California State University Long Beach), Hector Neff (California State University Long Beach) and Oswaldo Chinchilla (Museo Popol Vuh)**

[58] *Measuring spatial organization at El Baul, Cotzumalguapa, Guatemala*

The deposit at El Baul might represent a large-scale planned prehistoric community. The structure and organization of the El Baul deposit is largely unknown. This study uses ground penetrating radar to map the sub-surface near El Baul in order to examine the spatial relationships between architectural features. The degree of spatial patterning of group-scale artifacts located within the GPR data is used to measure the scale and magnitude of social organization within this deposit. This paper demonstrates the scale of spatial patterning at El Baul and its importance as part of a Late Classic urban center on the south coast.

**Sagi, Matt (Indiana U of Pennsylvania)**

[52] *Measuring Human Activity Levels at the Johnston Site*

This poster examines the capability of phosphate analysis and magnetic susceptibility to determine human activity levels at the Johnston site located in Indiana County, Pennsylvania. This site has had a unique past during which an enormous amount of sediment buried the site after construction of a flood control dam. The main objective of this research is to determine whether the two techniques will aid in the interpretation of the Johnston site despite its history of water-logging of soils and rapid deposition.

**Sakai, Sachiko (UC Santa Barbara)**

[18] *Investigation of Clay Sources for Production of Olivine Ceramics in the Arizona Strip and Adjacent Areas in the American Southwest*

Olivine ceramics are widely distributed in the Arizona Strip. Previous compositional analyses with TL dating have shown that three clay groups were used for production of olivine ceramics, and that these clay sources were not always used at the same time. Only one of the ceramic groups was matched to local clays. In this poster, I will investigate the clay sources, not matching these local clays. I will analyze clays from all possible geologic formations near the sites. I also experiment with mixing different clays and with sorting clays by grain size prior to comparison with the pottery groups.

[174] *see Garfin, Timothy*

**Salazar, Zenaido [148] *see Stoner, Wesley D.***

**Saldana, Melanie and C.L. Kieffer (University of New Mexico)**

[93] *The Use of Space in Operation V and Its Implications for the Interpretation of Human Bone in Midnight Terror Cave*

Operation V is a large, extensively modified chamber with the highest concentration of human bone thus far recovered from Midnight Terror Cave, Belize. Critical to the understanding of the chamber are two ritual complexes that include important natural features and human modification. The deposition of human bone in relation to these two ritual complexes suggests that the deposition was not mortuary in nature.

**Saldana, Melanie [93] *see Kieffer, Crystal L.***

**Salgado Gonzalez, Silvia (Universidad de Costa Rica), George O Maloof III (Universidad de Costa Rica), John W. Hoopes (Kansas University) and Mario Arias (Universidad de Costa Rica)**

[117] *Architecture and Social Complexity in Caribbean Costa Rica: The Nuevo Corinto Site.*

The authors discuss data from surface survey and topographic mapping at the site of Nuevo Corinto (L-74 NC) in the central Caribbean watershed, Costa Rica. Nuevo Corinto is a significant settlement with an occupation dating from 1000 B.C. to A.D. 1550. Complex architecture was built after A.D. 500 and is characterized by raised, circular stone re-enforced platform mounds, causeways paved with river cobbles, and stone plazas. We discuss the local context in which the architecture found at the site emerged, as well as how it relates to networks of long distance contacts among societies located within the Isthmo-Colombian and Circum-Caribbean Areas.

**Salgan, Laura [91] *see Perez Winter, Cecilia***



**Salisbury, Roderick (University at Buffalo)**

[143] *Approaching settlement change from a 'sediments as material culture' perspective. Geochemical investigations at Late Neolithic settlements in Hungary.*

This paper reconstructs changes in settlement organization and the use of space during the Late Neolithic of eastern Hungary, circa 5000-4600 BC. Multi-element geochemical analysis of sediments from small Late Neolithic and early Copper Age settlements allows correlation of chemical signatures with social activities. Data suggest that the size, organization and use of space within these sites varied during this transitional period. The methodological approach applied here also demonstrates the relevancy of a "sediments as material culture" perspective, as the links between human activities and site sediments are as significant as the connections between behavior and other classes of material culture.

**Samillán, César (Museo Nacional Sicán) and Izumi Shimada (Southern Illinois University)**

[170] *Middle Sicán Iconography and Religion: A Characterization and Ramifications*

Middle Sicán images on looted ceramic and metal objects in museum collections have shaped the existing views on its art and religion. Recent excavations have markedly expanded examples of Middle Sicán iconography, particularly those on painted textiles found in elite tombs in and outside of Lambayeque. Many of them were used to create ritual spaces in living world and display complex composition and stylistic variability not seen on ceramic and metal objects. This paper evaluates these images for a new characterization of Sicán art and its societal implications, including inferred interrelationship between Sicán and Chimú religious icons.

**Sampeck, Kathryn (Illinois State University) and William Fowler (Vanderbilt University)**

[2] *Re-evaluating the Early Postclassic in El Salvador from a Mesoamerican Perspective*

The Early Postclassic of southeastern Mesoamerica is poorly understood. Realignment of chronologies in central Mexico and the northern lowland Maya area indicate that some hallmarks of the Early Postclassic period co-occurred during the Late or Terminal Classic. We suggest a chronological realignment of the Early Postclassic site of Cihuatlan to the mid-ninth century A.D. This chronological revision in central El Salvador has repercussions for the entire region, including the Pacific coast of Guatemala and Copan. Regional patterning in western El Salvador during this period reflects dramatic depopulation, yet populations clearly maintained wide-ranging linkages that included central Mexico.

[2] *First Chair*

**Sampson, C. (Texas State University)**

[3] *Faunal diversity in the diet of the Seacow River Bushmen, South Africa*

Faunal remains from a cluster of 11 rock shelter deposits in the semi-desert Upper Karoo region of South Africa are dated between ~2000 BC and ~AD 1890. They reveal aspects of the meat intake of the Upper Seacow River Bushmen, a poorly documented grouping of hunter-gatherers engulfed by Dutch colonists, plus the diet of their Pre-Contact forbears. Their subsistence strategy does not fall easily into any of the established categories. With 90 species identified, a very broad-spectrum unspecialized subsistence is suggested, but the hunted component at most shelters is dominated by Springbok which points to a preferred target prey.

**Sanchez, Guadalupe [18]** *see Gaines, Edmund P.*

**Sanchez, Joseph [171]** *see Schmader, Matthew*

**Sanchez Miranda, Guadalupe [190]** *see Holliday, Vance T.*

**Sandoval Martinez, Hugo [99]** *see Punzo, Jose L.*

**Sandweiss, Daniel (University of Maine)**

[106] *Things That Go Bump in the Past: JBR and the Geoarchaeology of the Peruvian Coast*

Jim Richardson is a pioneer in the geoarchaeology of the Andean coast. In the 1960s, Jim was among the first to recognize that Holocene climate along the coast of Peru had not been stable. His work led to the recognition that El Niño frequency varied widely over the Holocene, with human consequences, and demonstrated the value of the archaeological record as a paleoclimate archive. In 1981, Jim was the first to signal the implications of post-glacial sea level rise for the archaeological record of early maritime adaptations in Peru. His work led directly to the discovery of Terminal Pleistocene fishermen.

**Sanger, Matthew C. [46]** *see Napolitano, Matthew F.*

**Santiago, Denisse (INAH)**

[111] *La cerámica de la Plaza A, en Tamtoc, un enfoque diferente*

El primer antecedente de la cerámica Huasteca la tenemos con los trabajos de Ekholm, posteriormente las excavaciones del Stresser-Péan en la zona Arqueológica de Tamtoc mostraron la riqueza de su alfarería, pero a décadas de estos trabajos poco hemos avanzado en el conocimiento. A partir un análisis cerámico realizado en la Plaza A, en la zona Arqueológica de Tamtoc, podemos saber que los tipos presentes no solo son los del período Posclásicos sino que los hay más tempranos y corresponderían con los fechamientos de Stresser-Péan, para el Clásico Temprano y con la fase cultural Coy.

**Sapp, William [105]** *Discussant*

**Sassaman, Kenneth (Univ of FL - Anthropology) [173]** *Discussant*

**Saturno, William [99]** *see Sharpe, Ashley E.; [99] see MacLellan, Jessica; [168] see Dobreiner, Jeffrey C.; [192] see Runggaldier, Astrid M.*

**Saunders, Paula (City University of New York)**

[178] *Ethno-history, Oral Tradition, and African Diaspora Archaeology: Community Empowerment in the Production of History in the African Diaspora*

Deciphering ideology of enslaved African peoples throughout the Americas has been the subject of recent archaeological studies. Two outcomes of these ideological studies have emerged. First, is the recognition that the interpretation of archaeological material from African Diaspora sites in the Americas must include significant descendent community involvement and the need to engage oral data sources. Secondly, it requires collaborative action among researchers from various disciplines. This paper uses an interdisciplinary approach to interpret archaeological materials related to spiritual practices of an enslaved African community in Jamaica. It also explores the rewards and challenges of collaborative research.

**Saunders, Rebecca (Museum of Natural Science, LSU)**

[165] *How high, how fast, how full: variability in mounded shell ring sites on selected coasts*

Extensive and intensive examination of shell ring sites on the lower Atlantic coast has provided information on both similarities and differences between the rings. Among the similarities are: height, generally over one meter and sometimes much higher; fill, whole clean shell; and the construction time--base and top dates are often statistically indistinguishable. These and other characteristics are compared to mounded shell sites in other countries. Together with ethnographic information, these data are used to discuss the function of rings in the social landscape of the lower Atlantic coast.

**Scarborough, Vernon [83]** *see Valdez, Fred*

**Scardera, Francis (Akwesasne)**

[72] *The Archaeology of a High School Student*

Appreciating the thought process of a high school student is similar to deciphering the subtleties of an archaeological site whose soils display a complex stratigraphy depicting different layers of understanding, accompanied by a series of anomalies which require further evaluation. This paper reviews the development and evaluation of archaeological curricula for high school students while providing light-hearted insight into the challenges and successes of engaging students along their "archaeological journey." A high school archaeology class can be used as an educational tool to foster a more holistic approach to understanding and appreciating history while developing students as active participants in the preservation of cultural resources.

**Scarry, C. Margaret [42]** *see Welch, Paul D.*

**Scarry, John (U of North Carolina)**

[17] *The Materialization of Ritual and the Interpretation of Ritual Material at Lake Jackson*

Examination of a ceramic assemblage recovered from excavations in Mound 6 at the Lake Jackson site reveals a distinct set of associated ceramic forms. I argue that these forms constitute the material expression of a basic pattern of ritual practice shared by the members of the Lake Jackson society, other Mississippian societies in the Lower Southeast, and the historic Apalachee descendants of the Lake Jackson people. Using ethnohistorical sources I link this assemblage to specific ritual practices described in the 17th-century Apalachee ballgame

manuscript, although it is likely that they were used more generally in purification rituals.

[42] *see Maxham, Mintcy D.*

**Scarry, Margaret (Univ. of North Carolina) and Vincas Steponaitis (University of North Carolina-Chapel Hill)**

[42] *Moundville as a Ceremonial Ground*

Archaeologists often use terms such as "ceremonial center" without considering how they relate to ethnographic structures. The basic building block of Native polities in the American South was a social unit the English called a "town." Here we pose the question, was Moundville such a town? We argue it was not. Rather, we suggest it functioned more like a ceremonial ground, a place of priestly ritual where people from many towns gathered. Moundville's history may have been driven by a changing balance of power between priestly officials situated at the center and town officials in outlying communities.

[42] *First Chair*

**Scarry, Margaret [42] *see Jackson, H Edwin***

**Schaafsma, Polly (Research Associate, MIAC)**

[87] *Patterns of Belief: Rock Art and Worldview in the American Southwest. A.D. 950-1450*

Rock art is the product of shared values and worldviews held by members of a culture at any particular time and place. This paper seeks to identify patterns of social identity, interaction, and change by reviewing the distributions of style and content of rock art imagery as they appear in the rock art throughout the landscape in the greater Southwest. Synchronic and diachronic continuities and differences are evaluated in terms of spatial patterning in order to suggest regional boundaries, social relationships, and stability as well as points of ideological shifts.

**Schaan, Denise**

[71] *Gender below the Equator line: the iconography and symbolism of ceramic pubic coverings in pre-Columbian Amazonia*

The archaeological record of pre-Columbian chiefdoms on Marajó Island shows plenty of pottery sherds of an exquisite female piece of wardrobe: a triangular shaped pubic covering (named tanga), likely used by elite females during puberty rites. In this paper, we draw comparisons between archaeological and ethnographic ceramic objects in order to think about these ancient ceremonies. Also, we examine the iconography of the archaeological tangas in order to infer about female statuses and their role in social organization, religion and ritual.

**Schach, Emily (Arizona State University) and D. Troy Case (North Carolina State University)**

[53] *Regional Variation in Gender Roles among the Ohio Hopewell*

Previous research based on relatively small samples of sexed skeletons from some Ohio Hopewell sites has hinted at possible differences between males and females in relative prestige and access to leadership roles within the three major regions of Ohio. The goal of this study is to examine burial treatment of both sexes in order to reassess the relative levels of prestige and access to leadership roles in each region, using considerably larger samples of sexed individuals than done previously. Three different types of mortuary data are assessed in an attempt to determine variation in gender prestige and roles.

**Schachner, Gregson (UCLA)**

[18] *Wallace Tank Pueblo: A Pueblo IV Period Village in Eastern Arizona*

The cluster of Pueblo IV villages in the Petrified Forest region has long been an enigma for Southwest archaeologists. Recent mapping and surface collection at Wallace Tank Pueblo provides new information about settlement size, chronology, and interregional social ties. This research indicates that Wallace Tank was one of the largest pueblos in eastern Arizona during the A.D. 1300s and that residents had strong social ties to the Hopi mesas and Silver Creek area. Comparisons to other late villages suggest that the Petrified Forest cluster may have been a key social and economic node connecting Pueblo IV villages in eastern Arizona.

**Schaepe, David M. [162] *see Graesch, Anthony P.***

**Schaffer, William C. [67] *see Carr, Robert***

**Scharf, Elizabeth (University of North Dakota)**

[98] *Paleovegetation: Providing an Environmental Context for Historic and Prehistoric Occupation in Northwest Florida*

Environmental reconstructions create a crucial background for interpreting human action and archaeological data. This paper seeks to contribute to our knowledge by presenting a palynological record from Clara's Bog, in Santa Rosa County, Florida. Pollen and sediments are used to generate a local vegetation record for this part of the Florida panhandle dating back some 4,000 years, covering recent, historic, and late prehistoric times in this area.

**Schauer, Matt (UIC)**

[191] *Flexibility on the Frontier: How the Inca conducted warfare in north highland Ecuador*

In the face of concerted resistance by the Cayambe, the Inca Empire was forced to change how they conducted warfare as well as their plans for consolidation in northern Ecuador. The Pambamarca fortresses reflect the flexibility of Inca military strategy on this hostile and unpredictable frontier. Using artifact and survey data from the Pambamarca Archaeological Project as well as GIS and statistical techniques, this paper demonstrates that the fortresses at Pambamarca were built by the Inca as part of a deliberate defense strategy to protect vital socioeconomic centers on the frontier.

**Schele, Elaine**

[126] *The Use of GIScience to produce A Composite Perspective and Understanding of Temple of the Cross at Palenque, Mexico*

Written records show that excavations at the Temple of the Cross at Palenque, first took place in the 18th century. Since then, numerous archaeologists have excavated the building. Over the past year, I have gathered and processed the scattered excavation record and transcribed it into one digital medium to cognitively and visually understand and analyze the physical evidence and the written narratives. I will present the outcome of this work through a visual mapping interface supported by ArcGIS and then explain and demystify the GIScience that I used to construct it, thus transferring the technology to others who are interested.

[126] *First Chair*

**Scherer, Andrew (Baylor University) and Charles Golden (Brandeis University)**

[83] *Water in the West: Chronology and Collapse of the Classic Maya River Kingdoms*

The royal dynasties of the Western Maya kingdoms are enigmatic if the Classic collapse was triggered by climate change. Environmentally, they are provided with some of the most abundant surface water and highest annual rainfall in the Maya Lowlands. Historically, the dynasties at Piedras Negras and Yaxchilan were among the first to fall at the beginning of the 9th century, while the kingdom of Tonina persisted into the 10th century. This paper explores the natural and cultural processes underlying the complexities of political collapse in the Western Lowlands, with a particular focus on the Middle Usumacinta River.

**Schieffer, Adam M. [90]** see *Pepe, James P.*

**Schieppati, Frank [109]** see *Hayward, Michele H.*

**Schiffer, Michael B. [112]** see *Walker, William H.*

**Schindler, William [145]** see *Cunnar, Geoffrey E.*

**Schleher, Kari (University of New Mexico), Cynthia Herhahn (University of New Mexico) and Deborah Huntley (The Center for Desert Archaeology)**

[13] *Glazed Over: Glaze Paint Composition of Northern Rio Grande Glaze Wares from San Marcos Pueblo, New Mexico*

Electron microprobe analysis yields insight into the glaze paint recipes used by potters in the Rio Grande Valley. Lead glaze paint was used to decorate pots at San Marcos Pueblo and other Rio Grande Valley villages from the 13th until the 17th Century. In this paper, we compare the glaze paint recipe used by San Marcos potters to recipes used at other villages. The stability of the San Marcos recipe through time is explored, along with the relationship between glaze color, composition, and the color of the underlying slip.

**Schleher, Kari [13]** see *Blinman, Eric*; [13] see *Franklin, Hayward H.*

**Schmader, Matthew (City of Albuquerque) and Joseph Sanchez (National Park Service)**

[171] *Spanish Exploration of la Nueva Mexico: Comparing 16th Century Expeditions of the American Southwest and Continental Interior*

Mid-sixteenth century Spanish objectives for exploring a large geographic region known as la Nueva Mexico ranged from seeking riches to establishing missions and settlements. Several expeditions were conducted there by Niza, Coronado, Alarcon, Sanchez Chamuscado-Rodriguez, Espejo-Beltran, Castano de Sosa, Morlete, Leyva-Humana, and Onate. Differing outcomes for each expedition hinged on original motivations, expeditionary logistics, different tribes encountered, responses to them, and to strategies applied to their respective situations. While failing to find wealthy civilizations and despite conflict with native peoples and financial difficulties, these expeditions gained valuable geographic knowledge about the land and its people and led to eventual colonization.

[171] *Third Organizer*

**Schmich, Steven (Arizona State University)**

[174] *Establishing Geographic Ranges for Pleistocene Hunter-Gatherers Using Proton Induced X-ray Emission (PIXE) Analysis*

Sourcing studies play an important role in understanding prehistoric mobility and territoriality. The ability to create quantifiable criteria that will group chert artifacts and link those groups to natural chert sources can help establish geographic ranges for Pleistocene hunter-gatherers. However, the petrogenesis of chert tends to result in relative homogeneity and a dominate silica content – both of which make chert challenging to source. PIXE, a non-destructive method for analyzing geochemical composition, demonstrated promising results on chert in two pilot studies. This research tests PIXE's effectiveness under the less than perfect conditions (e.g., patinas, weathering, variable sample dimensions) that define archaeology.

**Schmidt, Kari (Statistical Research, Inc)**

[75] *Formative Period Subsistence on the Lower Alluvial Fans of the Organ Mountains, Southern New Mexico*

In 2007, Statistical Research, Inc. (SRI) was awarded a 5-year contract for survey, evaluation, and mitigation projects at Fort Bliss in the southern Southwest. Excavations by SRI resulted in the recovery of a large subsistence assemblage from various Mesilla (circa A.D. 200 to A.D. 1100), Doña Ana (A.D. 1100 to A.D. 1200), and El Paso phase (A.D. 1200 to 1450) contexts. This paper compares and contrasts the faunal assemblages recovered at various sites and uses this information, as well as pollen and macrobotanical data, to address changing subsistence strategies in the Jornada Mogollon region during the Formative period.

**Schmidt, Klaus [95]** *see Carter, Tristan*

**Schmidt, Peter (University of Florida)**

[107] *Denial of Identity and History in Ethnoarchaeology*

Ethnoarchaeologists design projects without fulsome examination of cultural contexts—cosmology, ritual life, and the history of those amongst whom they work and live. Such oversights betray a lack of understanding for the role that history plays in contemporary identity, how it informs how people behave vis-à-vis other social groups, and how it enters into negotiating access to basic resources. There are other troubling issues, foremost among them the silencing of historical informants by using the now popular concept of "multivocality", a trope that homogenizes individual, subaltern testimonies into bland summaries, transforming the archaeologist into a ventriloquist who usurps historical identities.

**Schmitt, Dave N. [145]** *see Kiahtipes, Christopher A.*

**Schober, Theresa (Town of Fort Myers Beach), Corbett McP. Torrence (University of Vermont) and Tanya M. Peres (Middle Tennessee State University)**

[56] *Gradual Accumulation or Punctuated Events? The Pace of Mound Construction in Coastal Southwest Florida*

Caloosahatchee mound sites have dotted southwest Florida landscapes for 2,000 years, where the non-agricultural Calusa chiefdom was the dominant group at the time of Spanish contact. As symbols of power and authority, mounds reflect the organization of labor to create cultural landscapes. The use of shell and midden as building materials present challenges to understanding site construction and chronology. Twenty-five radiocarbon dates from alternating shell and earthen strata, zooarchaeological analysis and artifact content of one complete mound profile address the pace and nature of mound construction. These data strongly caution against radiometric dating of shell for timing site occupation.

**Schoeninger, Margaret (UC-San Diego) and David Hurst Thomas (American Museum of Natural History)**

[46] *Maize Cultivation on St. Catherines Island: New Stable Isotope and AMS Results*

The initial analysis of stable isotopes from St. Catherines Island burial populations was conducted in 1990. Today, we better understand the meaning of isotopic signatures and new technology helps fine-tune the results. Numerous isotopic analyses and complementary AMS dates have just been completed on samples of human bone from late prehistoric contexts on St. Catherines Island. This paper presents the results of this extensive reanalysis, with particular attention to the question of maize cultivation in the barrier islands of coastal Georgia.

**Schollmeyer, Karen (Arizona State University)**

[164] *12th Century Resource Use and Settlement Reorganization in the Eastern Mimbres Area*  
After AD 1130, residents of large Classic Mimbres villages in the eastern Mimbres area dispersed into scattered hamlets. I investigate the role of changes in resource access in this reorganization. Access to large mammals does not appear to have changed after 1130; these animals remained scarce during both periods. Settlement reorganization did change access to different types of agricultural land, particularly areas with high-permeability soils. Although some aspects of the 12th century reorganization may have been related to resource stress and changes in access, these shifts do not account for the magnitude of the settlement pattern changes in the area.

**Schortman, Edward and Patricia Urban (Kenyon College)**

[149] *Failing Like A State: The Rise and Quick Demise of the La Sierra Polity in the Late Classic Naco Valley, Northwestern Honduras*

Sharer and his colleagues have written a richly detailed account of state formation at Copan. Rulers of the 100km<sup>2</sup> Naco valley polity, 120km to the NE, initiated in the 7th century a comparable, if more mercurial, political trajectory inspired by Copanec models. This paper considers how foreign notions of rulership interacted with local political forms through the actions of agents organized within shifting alliances that spanned variable temporal and spatial scales. The dynamism and instability of the resulting power structure engendered a state very different from Copan and one whose legacy diverged considerably from that of its prototype.

**Schortman, Edward [113] see Urban, Patricia A.; [114] see Brady, Emmett; [114] see Schortman, Hayden N.**

**Schortman, Hayden (Kenyon College), Edward Schortman (Kenyon College) and Patricia Urban (Kenyon College)**

[114] *Structure, "Event", "event", and the Social Totality: Examining a Failed State in Precolumbian SE Mesoamerica*

Structuration theory allows us to look at the organization of culture, but it has been criticized as too synchronic. The concept of the "Event"—conjunction of processes that together result in major culture change, that is, alteration of the structure—expands structuration, accounting for change. The idea of "event" adds detail to the models. Small "events" are quotidian activities that make up life, both producing and reproducing structure. The conjunction of event, Event, and structure is used to describe and explain continuities in corporate political forms and the failure of personalized rule in the Late Classic Naco valley.

**Schoville, Benjamin [70] see Otarola-Castillo, Erik**

**Schreg, Rainer [91] see Fisher, Lynn E.**

**Schroeder, Sissel (University of Wisconsin)**

[142] *The Ordinary and the Extraordinary: Identifying the Origins of Variation in Mississippian Perishable Architecture at Jonathan Creek*

In the early 1940s, archaeologists seeking to expose the community plan of an entire Mississippian mound center undertook the excavation of the Jonathan Creek site in western Kentucky. Although the project terminated before the site was fully excavated, the remnants of 89 structures, 8 palisade lines, and two mounds within the village were documented. New analyses of multiple architectural attributes, including numbers of postholes, posthole diameter and spacing, roof supports, structure shape, and floor area, allow for the parsing of variation in architectural style. Possible secular and sacred origins for the diverse architectural styles represented at the site are suggested.

**Schroedl, Gerald (University of Tennessee), Bobby Braly (University of Tennessee) and Todd Ahlman (Historical Research Associates)**

[99] *Where Did Enslaved Africans Live at Brimstone Hill?*

The Brimstone Hill fortress on the Caribbean island of St. Kitts was occupied by the British from 1690 to 1853. Enslaved Africans conscripted from plantations or owned by the British constructed and maintained the fort. Black militia and soldiers of the West India Regiments also occupied the fort. Plantation slaves likely occupied huts at the base of the hill. Those attached to the military were housed in areas with specific support functions. Black soldiers occupied barracks, previously or subsequently occupied by white soldiers. Archaeological data reflect sharp differences between British soldiers and enslaved Africans.

**Schuldenrein, Joseph [175]** see *Thieme, Donald M.*

**Schultz, John [99]** see *Wardlaw, Dennis K.*

**Schurr, Mark (University of Notre Dame)**

[17] *From Chieftdom to Tribe: Parallel Mississippian Trajectories*

Parallels can be seen between the trajectories of two Middle Mississippian polities: that of Moundville in central Alabama, and of Angel in southwestern Indiana. For both, Middle Mississippian chiefdoms were replaced by tribal societies that lacked the more hierarchical organization of their predecessors. Trends in maize consumption, as reflected in human stable carbon-isotope ratios, parallel the changes in social organization, with higher maize consumption associated with more hierarchical social organizations. This association suggests functional connections between social organization and agricultural intensification that are the consequences of more proximate linkages between population size, distribution, and organization for effective maintenance and reproduction.

[17] *First Chair*; [145] see *Guerrero, Emma*

**Schwadron, Margo (NPS-Southeast Archeological Center)**

[165] *South Florida's Shell Works Legacy: Examining Prehistoric Landscapes and Maritime Complexity*

South Florida contains some of the largest, most complicated shell midden sites in the world, including immense shell mound complexes called shell works. These massive sites are more than archeological palimpsests and can't be explained as just large shell midden accumulations or amalgamations of shell mounds; they are distinct, socially constructed prehistoric landscapes reflecting the emergence of maritime social complexity within the region. This ongoing study examines south Florida shell works sites within their temporal and regional contexts, and explores changes in social organization over time reflected in the architecture and landscapes of shell works.

[90] see *Memory, Melissa J*

**Schwarcz, Henry P. [83]** see *Repussard, Antoine*

**Schwartz, Lauren (UC, Riverside)**

[114] *A Bridging Experience: Meaning & Significance of Community in Southeast Mesoamerican Archaeology*

Over the past decade, the study of community or communities has received a great deal of attention in Mesoamerican archaeology. However, the concept, identified to be a mid-level institution between the household and region, is only beginning to be applied within discourse of the Southeastern region of Mesoamerica, namely western Honduras. The goal of this paper is to introduce the most recent utility of the term community and how it can be instrumental in understanding the underlying social, political, economic, and environmental processes and interactions that shape identity variation and commonality, through space and time within this region.

[114] *First Chair*; [114] see *Soto, Gabriella*

**Schwartz, Mark (Grand Valley State Univer) and Nicola Laneri (University of Catania)**

[95] *Mesopotamia's Frontier: Reconstructing an Emerging Complex Society in Anatolia During the Second Millennium BC*

During the period from the late Third to the first half of the Second millennium BC, the Ancient Near East underwent a dramatic social transformation with the collapse of the Akkadian empire. However, many crucial questions still remain unanswered regarding the area of southeast Anatolia. The site of Hirbemerdon Tepe, located in the upper Tigris valley, is ideally suited to

examine political development of the region because four previous seasons of archaeological excavations have revealed a large and extremely well preserved occupation from this period. This paper will present five years of research from Hirbemerdon Tepe's Middle Bronze Age.

**Schwarz, Danielle (University of Missouri), Margaret E. Beck (University of Iowa) and Michael D. Glascock (University of Missouri - Columbia)**

[10] *NAA of Patayan and Hohokam Pottery at MURR*

Previous obsidian and ceramic compositional analyses suggest a period of interaction between Hohokam and Patayan populations around the modern city of Gila Bend, Arizona during 750 – 1150 AD with a Patayan cultural expansion after 1000 AD. NAA is used to analyze 350 pottery samples and 20 raw clay samples from the region. The compositional groups are compared to previous LA-ICP-MS compositional data, existing NAA data on Patayan ceramics in MURR's database and the raw clay samples from the region with a focus on the characterizing elements. The significance of the additional data for the MURR database will also be discussed.

**Schwarz, Danielle [18]** *see Beck, Margaret E.*

**Schwarz, Kevin (ASC Group, Inc.)**

[64] *Architectural elaboration as an orderly process: grammars of design in the Maya Classic-to-Postclassic transition in Peten, Guatemala.*

This paper presents an architectural grammar analysis focused on understanding the Maya Classic to Postclassic transition in Peten, Guatemala. The grammar analysis borrows a rule-based method from linguistics which is employed in exploring regularities in structure design. It provides a comprehensive description of architectural variability for use in a controlled comparison. A complete description is needed because changes in architectural form, specifically increased use of C-shaped masonry benches, are thought to mark in-migration that accompanied the Classic Maya Collapse (ca. A.D. 800-A.D. 1000). The paper demonstrates that the complexity of the architectural record now evident belies the previous migration scenario.

**Schwendler, Rebecca (SWCA Environmental Consultants) and Caryn Berg (SWCA Environmental Consultants)**

[34] *Cultural Pathways through Western Colorado*

The numerous drainages that cross the Piceance Basin of western Colorado made that area a pathway for human movement and settlement from the Archaic through Historic times. Seemingly most intensively inhabited during the Late Prehistoric and Protohistoric periods, this area provides abundant evidence for material exchanges and cultural transitions that resulted from the immigration of new groups and the displacement or transformation of existing ones. This poster introduces the Piceance Basin and its diverse lines of material evidence for human mobility and interaction, and resulting cultural transformation.

[34] *First Chair* [34] *Second Organizer*

**Schwendler, Rebecca [34]** *see Baer, Sarah; [34]* *see Barnes, Zonna.*

**Scott, Ann (Univ. of Texas at Austin) and Judith M. Maxwell (Tulane University)**

[115] *Guardians and Spirit-owners in Caves and Mountains: Defining the Sacred Landscape of the Kaqchikel Maya*

Recent investigations documented modern sacred sites in the Kaqchikel Maya speaking region of the southern Guatemalan highlands and revealed a pattern of defining sacred space for communities. A five directional pattern incorporates the cardinal directions as well as a center point, and actively employs the 260-day Maya calendar patrons or nawals. A variety of natural features, such as caves, mountains, boulders, and valleys, embody the sacred landscape of Kaqchikel communities. Locations will be discussed describing the guardians that inhabit the surrounding landscape, protect the local inhabitants and demarcate the spiritual boundaries of a community.

[93] *First Chair*

**Scott, Ann [67]** *see Williams, Joel C.*

**Scott, Elizabeth (Illinois State University)**

[54] *Colonial Societies and Domestic Production*

Production in the home was critically important to colonial and post-colonial economies post-dating AD 1400. However, domestic production remains significantly under-valued in historical archaeologists' interpretations of the past, although it accounts for the vast majority of non-



architectural artifacts recovered from household sites. Using cultural Marxism and feminist theory, this paper draws on examples from French and British colonial and post-colonial sites in the Great Lakes and Mississippi Valley of North America to highlight the ways in which class, gender, ethnicity, and racial categorization determined who did what work, and for whom, within colonial households.

**Scott, Randi (University of R.I./F.A.R)**

[178] *The Archaeology of Healing*

In Feb. 2003, a horrific fire swept over West Warwick, RI. The Station Night Club. 5 years later funerary displays and spontaneous memorials continue to be erected and modified on a continuous basis. Monitoring these changes has given a glimpse into the changing processes of mortuary rituals. The erecting of such displays suggest changing cultural values with violent death, providing insights into the archaeology of death, human behavior, healing and the analysis of the material culture left behind.

**Scott, Susan [42]** see *Jackson, H Edwin*

**Scott, Thomas [125]** see *Means, Guy H.*

**Seamont, Morgan (University of Colorado), Karl Laumbach (Human Systems Research) and Stephen Lekson (University of Colorado-Boulder)**

[18] *The Cañada Alamosa Project: Understanding Human Occupations on a Cultural Frontier*

The study of identity, migration and boundaries has been the focus of the Cañada Alamosa Project, located in west-central New Mexico. Previous excavations at four nearby pueblos had revealed sequential populations affiliated with the Mimbres, Socorro, Tularosa and Mesa Verde traditions. Recent work at the Victorio site has revealed 8th century pithouses with ceramic and architectural affiliations to both north and south and supported the concept of an aggregated Tularosa Phase community consisting of over 450 rooms. Excavations at Pinnacle Ruin have focused on the relationship of a possible Mesa Verde migrant community to Victorio's 13th-century Tularosa component.

**Sears, Erin (University of Kentucky)**

[148] *Preliminary Analysis of Figurines from Tres Zapotes, Veracruz, Mexico*

Formative ceramic figurines recovered during multiple excavation seasons by members of the Proyecto Arqueológico Tres Zapotes (PATZ) reflect specific thematic, construction, and paste characteristics. The assemblage contains previously documented imagery as well as incorporating new specimens that expand upon suggested gender associations. The Tres Zapotes figurines and ceramics were examined in the summer of 2007; a subset of specimens was selected for paste characterization by Instrumental Neutron Activation Analysis (INAA). Samples were taken in order to address questions regarding manufacturing loci within the site or to obtain evidence of contact with other Formative sites within the region.

[76] see *Bishop, Ronald L.*

**Sedig, Jakob (University of Colorado)**

[88] *Projectile Points As Ritual Objects*

In the American Southwest projectile points are often assumed to have been informally constructed and used for hunting and warfare. Recent analysis of a sample of projectile points from the northern San Juan region dating to the Pueblo II - Pueblo III periods indicates that in some cases projectile points served important symbolic functions, with much time and effort put into their manufacture. Variability in manufacture and use of projectile points is evident in comparisons of these objects found at small sites and at Chacoan great houses and suggest differential access to unique raw materials, and some level of specialization.

**Sedov, Sergey [20]** see *Borejsza, Aleksander*

**Seebach, John (Sul Ross State University)**

[88] *The Paleoindian Record of Trans-Pecos, Texas*

Trans-Pecos, Texas plays a marginal role in current models of Paleoindian adaptation. This is likely due to the dearth of published details about the regional record, which perhaps stems from an almost total lack of Paleoindian sites. The region is not, however, devoid of Paleoindian artifacts. Instead, the Trans-Pecos record is comprised of numerous isolates surrounding a small number of sites, a distinct pattern that may implicate mobility. Additionally, two spikes in occupation, measured in terms of artifact density and distribution, are evident: the first during the Folsom era and the second during the terminal phases of the early Holocene.

**Seguchi, Shinji**

[167] *From a passively-acquired landscape to actively-created landscape: landscape shift of the Jomon complex foragers in Kansai district, Japan*

The Jomon complex foraging culture in the Japanese archipelago (ca 1,3000-3,000BP) can be depicted as a long adaptational process to the post-glacial environments. Taking the Kansai district as an example, this paper addresses that the process can be divided into two stages from the viewpoint of landscape history: 1) the stage of a "passive-acquired" landscape, in which the subsistence system was still strongly restricted by regional environments (up to 4,000BP), and 2) newly introduced technology complex launched large-scale resource exploitation and started modifying the landscape in a more positive manner (4,000BP onwards).

**Segura, Rafael and Izumi Shimada (Southern Illinois University, Carbondale)**

[170] *Examining Middle Sicán - Central Coast Interaction, ca. A.D. 1000*

Distinctive Middle Sicán artifacts, especially its hallmark blackware bottles bearing the Sicán Deity icon, spread rapidly over much of the Peruvian coast around A.D. 1000 forming a horizon. Various central coast sites, including the famed ceremonial-funerary center of Pachacamac, have yielded either imported Middle Sicán objects and/or their local imitations. This paper examines relevant evidence to elucidate the possible mechanism(s) and process of their distribution, including partnership between the two great ceremonial centers of Sicán and Pachacamac for acquisition and distribution of ritual items such as Spondylus and aggrandizement of their prestige and power.

**Seibert, Jeffrey (Trent University)**

[86] *Classic Maya social space: changing patterns of access, spatial segmentation and social status in the Maya lowlands*

This paper seeks to analyse the changing nature of patterns of movement through urban environments in the Maya area over time, examining the changing morphology of Maya centres and the concomitant changes in movement through these cities, in particular the points of articulation between the broader urban fabric and architectural complexes and buildings. This paper seeks to elucidate some general trends concerning the changing nature of spatial patterning and movement in Maya cities, and how these changes reflect concurrent changes in Maya society. This study will be conducted through a combination of architectural, art historical, and spatial analyses.

**Seifert, Laura [135]** *see Elliott, Rita F.*

**Selby Crowley, Suanna [175]** *see Thieme, Donald M.*

**Sellen, Adam (Universidad Nacional Autónoma de México) and Lynne S. Lowe (Centro de Estudios Mayas, Universidad Nacional Autónoma de México)**

[163] *Picking up the pieces: nineteenth century archaeological materials from Yucatán in the American Museum of Natural History*

The American Museum of Natural History in New York holds a diverse collection of artefacts from Yucatán that was assembled throughout the nineteenth century. The stories behind the objects tell us about the activities of a group of proto-archaeologists and local antiquarians who were exploring the region in search of pre-Hispanic remains. Using the materials identified in the Museum, and records from other archival sources, our aim is to reunite the orphaned, de-contextualized remnants of this early burst of proto-scientific inquiry with present day knowledge, and to shed light on the obscure history of their transit to the Museum.

**Semon, Anna M. (American Museum Nat Hist)**

[46] *Tracking Temporal Contexts: Establishing Site Chronology at Back Creek Village, St. Catherines Island, GA*

Ceramic typology and radiocarbon evidence can provide both period and phase level chronological controls on the Georgia coast. We can fine tune this sequence by examining temporally sensitive ceramic attributes such as rim treatments and other decorative elements, from assemblages recovered in discrete, short-term archaeological deposits. This paper reports on recent attribute-level ceramic studies of sherds recovered from Back Creek Village, St. Catherines Island. Coupled with 8 associated radiocarbon dates, the ceramic attributes allows us to establish a more fine-grained Late Prehistoric chronology for the island.

**[46]** *First Chair*

**Seramur, Keith (Appalachian State University) and Ellen Cowan (Appalachian State University)**

[80] *Geoarchaeology of the Long Swamp Site on the Etowah River*

The Long Swamp Site is located on three terraces north of the Etowah River. The T3 is a Pleistocene surface with a well-developed Bt-horizon and polygonal cracking at depth attributed to LGM climate. The T2 terrace formed by ~8 ka B.P. with buried soils indicating Late Pleistocene and Early Holocene periods of landscape stability. The T1 terrace is a Late Holocene landform bordered by a prehistoric levee. A levee of historic sediment separates the river channel from the prehistoric deposits. Geochemistry and sedimentology of alluvium and feature matrix is being used to evaluate site formation processes and differentiate feature characteristics.

**Serra, Mari (IIA-UNAM)**

[20] *Xochitecatl-Cacaxtla*

During the Formative period begins the construction of the civic-ceremonial centre that concentrates all the sites of the Tlaxcala Valley between the Zahuapan and Atoyac rivers. Its strategic location on the valley is due not only to the exchange routes to the Gulf of Mexico, the Oaxaca region, the Central High Plateau and the Morelos Valley, but also to the sacred geography that the use of the ritual space gives. In this paper we analyze the social and economic organization that characterized this centre from the Formative period until its peak in the second occupation during the Epiclasic, remarking the activities of specialization and daily life trying also to situate it in the bordering Puebla region by the comparison of the identified material culture. The analysis is made using the results of surface remains and excavations in the rural settlements and the inhabited terraces of the Xochitecatl-Cacaxtla city.

**Sesler, Leslie and Tim Hovezak (National Park Service)**

[144] *Farming at the Edge of Paradise: Tracking Changes in Early Agricultural Settlement*

Cultural and temporal linkage between the Basketmaker II sites in the Animas River drainage near Durango, Colorado, and those along the San Juan River in northwest New Mexico have long been assumed. Early agriculturalists occupied the valleys, tributaries, and adjacent uplands of these two rivers systems for more than eight centuries. Similarities in architecture, site structure, and lithic assemblages suggest that these occupations are related, but chronometric data provide evidence that the occupations in these two areas are temporally discrete and may be the result of regional migrations and changing subsistence systems.

**Sesler, Leslie [144] see Hovezak, Tim**

**Setzer, Teddi (Univ. of South Florida)**

[130] *A Bioarchaeological Analysis of Human Skeletal Remains from the Middle Bronze Age Tomb of Serra 'e Sa Caudeba (Sardinia, Italy)*

The health of populations in prehistoric Sardinia (Italy) is poorly understood. Osteological analyses on this island are usually limited to basic inventory issues. This study expands on this knowledge by examining paleopathologies occurring in a human skeletal collection (MNI = 239) from the Middle Bronze Age (ca. 1600 to 1300 BC) tomb of Serra 'e Sa Caudeba. Serra 'e Sa Caudeba is located in a region known historically for land clearing, farming, and malaria. Radiocarbon dates were also obtained to contribute to the understanding of the chronology of prehistoric Sardinia, and the remains were tested for malarial ancient DNA.

**Sever, Thomas (U. of Alabama, Huntsville), Matthew Welch (University of Alabama, Huntsville), Robert Griffin (Pennsylvania State University) and Udaysankar Nair (University of Alabama, Huntsville)**

[83] *Agricultural Land Use, Deforestation, and Drought Severity*

We use a simulation of slash-and-burn maize agriculture in the Maya Lowlands to examine the relationship between deforestation related to agricultural practice and the hydrologic regime. Previous work has applied the MM5, WRF, RAMS, and CCSM3 models to study the effect of broad-scale deforestation on climate (temperature and rainfall) in Mesoamerica. We apply agent-centric simulations of agricultural practice to more accurately model the process and spatial extents of deforestation. Initial results from the current simulations contribute to an understanding of how drought is experienced, according to site-specific agricultural practice, intensification measures, and related deforestation.

**Sewell, Kristin (Statistical Research, Inc), Callie Unverzagt (Statistical Research, Inc.) and Charlotte Cable (Statistical Research, Inc.)**

[43] *Sugar and Spice and Trousers are Nice: An Exploration of Gender Roles in the American Southwest through Clothing, Fasteners, and Funerary Objects*

Mortuary analysis of burials in Tucson's National Cemetery provides a unique glimpse into expressions of gender on the American frontier. Using the remains of garments, clothing fasteners, footwear, jewelry, and other personal objects, this paper explores how settlers in this burgeoning community balanced the practical needs of life on the frontier with traditional displays of 19th century femininity and masculinity. In doing so, the population of Tucson negotiated conventional gender roles amidst the unique pressures and opportunities of frontier living in the American Southwest.

**Sewell, Kristin [43]** see *Hefner, Joe T.*; [43] see *Pye, Jeremy W.*; [43] see *Spurr, Kimberly*

**Shackley, M (UC, Berkeley) and Celeste Henrickson (University of California, Berkeley)**

[47] *From the Unknown to Known: Obsidian Provenance Studies in Baja California*

Along with the sheer magnitude of new archaeological research in both Baja California states, obsidian provenance studies have equally increased. Recent work discovering, defining, and chemically characterizing sources of archaeological obsidian in Baja California has begun to change our concept of prehistory. Here we discuss the known sources on the peninsula, some of the archaeological implications, and briefly discuss the sources that appear in the archaeological record, but have not yet been located. Previous inference that obsidian source material appears to only be distributed 200 km north and south, seems not to hold, particularly south of Valle del Azufre.

[168] *Discussant*

**Shaffer, Brian (Denton, Texas)**

[178] *Significant Shortcomings in the Use of Ethnographic Data to Interpret Prehistoric Iconography: A Mimbres Case Study*

Iconographic interpretation is a widely applied process for which there are no clear rules, the interpretations based on unique paradigms, and formalized using ambiguous associative relationships. To accept this process as valid, it should first be valid in culturally relevant historic contexts with replicable results. Several Southwestern ethnographic studies indicate that such diachronic interpretations are unsubstantiable at more specific, often sensational levels and problematic at general levels. If the ethnographic basis for interpretation is dysfunctional, then the interpretations of prehistoric iconography will be dysfunctional for Mimbres-Mogollon as well.

**Shaffer, Gary (USDA/NRCS)**

[53] *The Distribution of Soapstone Vessel Technology in Maryland and the District of Columbia*

This poster presents and interprets a map of the locations of all known prehistoric archaeological sites in Maryland and the District of Columbia with soapstone vessels and vessel sherds. Another map shows the distribution of sites with non-vessel artifacts of soapstone. Analysis of these maps compares the locations of nonquarry sites with those of soapstone quarries and the transportation corridors of streams. Several studies of differences in soapstone vessel reduction at quarries and nonquarries focus on northeastern Maryland and include frequency of preform/nonpreform classes, wall thickness, and surface finish.

**Shah, Sudha (University of Michigan/ Brockington and Associates)**

[14] *Pearls and the Lady of Cofitachequi*

The paper presents results from an-ongoing research project aimed at exploring the cultural underpinnings of social exchange and the transaction of shell valuables among native populations of the Muskogean language family. Taking a diachronic and cognitive approach, the study analyzes oral traditions, historic texts, and ethnographic and language data to develop a framework of the conceptual categories and schemas shaping native perspectives on exchange. The implications of these results for our understanding of how the gifting of shell may have been used to negotiate social interactions between Europeans and Indians in Early Carolina are then detailed.

**Sharer, Robert (Penn Museum) [149]** *Discussant*

**Sharp, Emily [97]** see *Chapa, Reymundo*

**Sharpe, Ashley (Boston University) and William Saturno**

[99] *The Maya Zooarchaeological Record from San Bartolo, El Peten, Guatemala*

Faunal remains from archaeological sites are a significant yet commonly overlooked source of information that provides unique insights into the social habits of a culture. Animal teeth and bones can offer details about a society's diet, hunting and trading practices, religious beliefs, and even past environmental conditions. At the Preclassic/Late Classic Maya site of San Bartolo, Guatemala, osteological remains were identified and analyzed with respect to species frequency and context. The results contribute to our understanding of how the former inhabitants of the Peten rainforest took advantage of their environment's animal resources.

**Sharratt, Nicola (Dept Anthropology, UIC)**

[81] *Terminal Tiwanaku Social Identities; mortuary evidence from the Moquegua Valley*

Data from both heartland and diaspora terminal and post-Tiwanaku household and mortuary contexts indicate cultural and biological continuity from the height of the polity to the decline of the state. Despite certain socio-political changes, there is evidence for significant ongoing adherence to a collective Tiwanaku identity. Using evidence from an earlier and a terminal Tiwanaku cemetery in the Moquegua Valley, this paper explores the social categories that intersected this terminal collective identity and considers whether similar particular identities, based on gender, age, occupation, ethnicity and so forth, were also maintained as the polity declined.

**Shaw, Justine (College of the Redwoods)**

[133] *New Insights into Water Sources in the Cochua Region*

Settlement pattern research conducted in the Cochua region of Quintana Roo, Mexico has revealed long history of ancient Maya occupation that peaked during the Terminal Classic and continued into the Postclassic. However, cores from nearby Lake Chichancanab have revealed that the Terminal Classic was the most arid period for the last 8,000 years, raising questions about how a population could have survived, let alone thrived, during this challenging time. Research from 2008 has begun to provide insights into subtle water features that appear to have been utilized to supply water in the dry and challenging northern Yucatan.

**Shaw, Leslie, Allan Cobb (San Antonio, Texas), Eleanor King (Howard University) and James Brady (California State University-Los Angeles)**

[93] *Power, Landscape, and Subterranean Space*

Because the soft limestone in northern Belize prevents large caves from forming, subterranean features have been largely ignored by archaeologists. Excavations at Maax Na, Belize in 2008 investigated a shrine structure built directly over a small, natural cave. The clearing of a deliberately blocked passage in the cave revealed an opening at the foot of the shrine. The opening was clearly enlarged in antiquity to make it the principal entrance. Excavation of the cave and shrine pair at this site offers new perspectives on how the Maya created a symbolic landscape that served to legitimize the dynastic power structure.

**Shaw, Matthew (University of Missouri), John P. Staeck (College of DuPage) and Matthew Shaw (University of Missouri, Columbia)**

[123] *Form, Function, and Identity Marking: Bisection of the Southern Bastion Wall at Břevlav-Pohansko*

Results of the first complete bisection of the southern bastion wall at the Great Moravian (approximately 800-900 C.E.) center of Břevlav-Pohansko, Moravia, are presented. Excavations revealed a construction serving at least 3 distinct purposes, including social boundary marking, defensive fortification, and flood control. A fourth function related to domestic habitation is also suggested. Cross-dating of the ceramics suggests a relatively late construction date, likely associated with both a period of increasing warfare between the Moravians and their Germanic neighbors to the west and increasing political centralization among the Moravians.

[123] *First Chair*

**Shaw, Matthew [123] see Shaw, Matthew L.; [123] see Staeck, John P.**

**Shearn, Isaac (University of Florida) and John Crock (University of Vermont)**

[150] *Spatial Organization of the Late Ceramic Age Village at Rendezvous Bay, Anguilla*

The circular organization of early Ceramic Age settlements in the Caribbean is viewed by some as evidence of an Arawakan Diaspora. The ring-like patterns of early sites contrast with the development of elongated late Ceramic Age settlements such as Rendezvous Bay. Changes over time in settlement shape and orientation are investigated as potential outcomes of local environmental conditions and/or increased reliance on maritime resources. Hierarchical social

relationships, also argued to be a central feature of Arawakan heritage, appear to develop as part of the linear site structure, as evidenced by the distribution of certain artifact classes at Rendezvous Bay.

**Sheehy, James (Penn State University/Juniata College) and Miguel Medina Jaen (I.N.A.H.)**

[20] *Caves, Chronology and Cosmovision in the Barranca del Aguila, Puebla, Mexico*

The 1994-1998 Proyecto Acatzingo-Tepeaca settlement survey identified a large number of cave sites utilized intermittently from the Formative Period to the present day. One of the most interesting concentrations of caves is located in and near the Barranca del Aguila in the state of Puebla, Mexico. This presentation describes several of these caves and their association with surface architecture, summarizes their chronological placement vis-à-vis ceramic surface collections, and discusses their symbolic significance with regard to ancient Central Mexican cosmovision.

**Sheets, Payson (University of Colorado)**

[149] *Bob and the five Ws at Chalchuapa, El Salvador: Who, What, Where, When, and Why.*

Bob Sharer directed the Chalchuapa Project during the late 1960s and early 1970s, and focused research on these five key "W" questions. Beginning with the "what" "where" and "when" he established a detailed chronological sequence of artifacts and architecture from the Early Preclassic through the Postclassic. Then came the "who" in terms of sophisticated explorations into ethnicity, treacherous ground where others often feared to tread. At last came the "why" as Bob explored domains of regional economics, politics, and religion. My own research followed leads provided by Bob. The Ceren site provides a good example.

**Shepardson, Britton ('a pó), Britton Shepardson and Tim Jeffryes (Network Solutions, LLC)**

[147] *Making GIS Data Accessible and Public: Terevaka.net Data Community*

GIS has become the standard for many archaeologists, academic departments, and cultural resource management firms in the Pacific. Technological advances in field equipment, computers, and software have greatly increased the rate at which archaeologists generate GIS databases. Consequently, much of our data never reaches the public domain, or even our academic colleagues. Furthermore, the island and tourist communities in which we work rarely have access to GIS software. We offer an online data community for Pacific Island archaeologists where Microsoft Excel data can be used to build and maintain GIS databases that render in a user-friendly and visually-oriented Google Maps format.

**Shepardson, Britton [147] see Shepardson, Britton L.**

**Sheptak, Rus (University of California - Berkeley) and Kira Blaisdell-Sloan (University of California)**

[117] *Indigenous Lifeways in Colonial Honduras: Community, Practice, and Interaction in Omoa and Ticamaya*

Documentary and archaeological data indicate that many Honduran indigenous communities were tightly intertwined in the colonial era. This paper examines data from two specific colonial era Honduran sites with indigenous components; the Pueblo de Indios of Ticamaya on the Ulua river, and the Fortaleza de San Fernando de Omoa, on Honduras's Caribbean coast. Based on historic, lithic, and ceramic data this paper will argue that the indigenous peoples in a variety of settings were clearly engaged in shared communities of practice that far exceeded their localized settlements.

**Sherman, Jason (University of Wisconsin-Milwaukee) and Laura Villamil (University of Wisconsin-Milwaukee)**

[133] *Excavations at Margarita (Quintana Roo, Mexico): Preliminary Results of the 2008 Season*

In 2008 an excavation program was initiated at Margarita, a Maya site located in south-central Quintana Roo, Mexico. This paper reports on the results of excavations conducted in Patio Group 6A, which uncovered the remains of an elite residential structure built during the Late Classic period (A.D. 600-800). The information obtained, coupled with data to be gathered in future excavation seasons, provides us with an opportunity to study the social organization of a densely settled, medium-size Maya settlement, and to reconstruct the social, economic, and political relationships linking Margarita with other large centers in the central and northern Maya lowlands.

**Sherman, Stephen [29] see Miller, Pamela K**

**Sherwood, Sarah [84] see Herrmann, Nicholas P.**

**Shew, Dana (University of Denver)**

[88] *Feminine Identity Confined: the experiences of Japanese American women interned during WWII*

This poster focuses on the effect that internment had on Japanese American feminine identity at Colorado's Japanese internment camp, Amache, through the analysis of archaeological material, archival documents, and oral histories.

**Shimada, Izumi (Southern Illinois University), Carlos Elera (Museo Nacional Sicán) and Gabriela Cervantes (Pontificia Universidad Católica del Perú)**

[170] *Testing for Middle Sicán Dual Social Organization: Results and Ramifications of the 2008 Tomb Excavations*

Since 1990, the Sicán Archaeological Project has pursued a long-term, interdisciplinary investigation of the 1000 year-old Middle Sicán mortuary practices to reconstruct its social organization. This effort has focused on tombs of diverse sizes and shapes distributed under and around the monumental temple mound of Huaca Loro with a 150 meter-long N-S central platform. Based on earlier tomb excavations, it was hypothesized that the Middle Sicán society had an asymmetrical dual organization. The paper discusses implications of the 2008 excavations of three shaft tombs located at the northeast corner, northwest corner and center of the mound on this hypothesis.

[170] *First Chair*

**Shimada, Izumi [170] see Segura, Rafael; [170] see Shinoda, Ken-ichi; [170] see Wagner, Urse; [170] see Samillán, César A**

**Shinoda, Ken-ichi and Izumi Shimada (Southern Illinois University)**

[170] *Genetic Variation Among the Moche and the Sicán on the North Coast of Peru*

Recovery of ancient DNA has become an increasingly important tool for elucidating the origins of ancient populations and their relationships. To assess the genetic affinities within and among the ancient societies flourished on the north coast of Peru, human skeletal remains belonging to the Moche and the Sicán societies were analyzed using the ancient DNA technique. Our results provide new information about the patterns of genetic diversity in ancient Peruvian society, and its role in the formation of the ancestral Andean gene pool.

**Shoberg, Marilyn (University of Texas)**

[89] *Woodworking at the Gault Clovis Site*

Microwear analysis is used to evaluate how stone tools were used at the Gault Clovis site. Wear traces on experimental replica tools used in tasks relevant to Paleoindian cultural behavior are the inferential framework against which archaeological tools are compared. While artifacts of wood have not survived in the depositional environment at Gault, it has been possible to identify stone tools used in their manufacture. The wear traces on Clovis tools from Gault used in woodworking are presented here with the corresponding evidence from experimental tools used on wood. Tools used in bone working experiments are presented for comparison.

**Short, Laura (Texas A&M) [59] Discussant**

**Shott, Michael (University of Akron)**

[44] *Morphometric Approaches to the Study of Fluted Points*

Points are among the most iconic artifacts in the American record. Decades of study have produced a vast catalogue of types used in typological dating and a wide range of functional inferences. Yet archaeology remains in a descriptive Linnaean stage. We know what was, and when and where it was. But we lack a theory of change in the size and form of points. One way to develop this theory involves morphometric methods borrowed from paleobiology. I discuss the potential of this approach and its relevance to the study of varieties of fluted points in the Americas.

**Shum, Annalee [130] see Pawn, Ian C.**

**Siegel, Peter (Montclair State Univ)**

[172] *Site PO-29 in Context: Past and Present*

The existence of Site PO-29 has been known to the archaeological community for about 30 years but only in the last two has the magnitude of its importance become clear. This civic-ceremonial center undoubtedly was a focal point for regional political theater and competition. The very

space itself must have been contested. I review the changing political dynamics of the site from pre-Columbian times to the present. Memory and competing visions of the past produce a powerful fracture plane, along which archaeological practice is played out.

**Sievert, April [5]** *Discussant*

**Sigurgeirsson, Magnus [122]** *see Smith, Kevin P.*

**Silliman, Garrett (Edwards-Pitman Environmental, Inc.)**

[55] *The Archaeology of the Atlanta Campaign*

The rapid urbanization of metro Atlanta continues to envelop a myriad of sites significant to the 1864 Atlanta Campaign. The loss of these sites has placed Atlanta Campaign locations on the Civil War Preservation Trust's most threatened list in 2006 and 2007. In response to this threat, Cultural Resource Management (CRM) firms have been at the forefront of recent research and, in many cases, preservation efforts. This paper provides an overview of current CRM Archaeology relating to the Atlanta Campaign, including the author's archaeological research at the Kennesaw Mountain National Battlefield Park, the Chattahoochee River Line, and the relic landscape of the Peachtree Creek battlefield.

[55] *First Chair*

**Silliman, Garrett [80]** *see Hise, Alana J*

**Silliman, Stephen (UMass-Boston) [173]** *Discussant*

**Silva, Rosicler (Instituto Goiano de Pré-História e Antropologia - Universidade Católica de Goiás), Cláudio César Souza e Silva, Gabriele Viega Garcia and Julio Cezar Rubin de Rubin**

[139] *Constructed tecnogenic deposits in the "Pelourinho" Historic Center of Salvador – Bahia/Brazil*

The reurbanization project of the Pelourinho – Historical City Center Salvador/BA being developed by the IPHAN and Monumenta is currently in its 7th stage, encompassing 11 city blocks. Archaeological research in the area identified and studied the constructed tecnogenic deposits (open-air waste landfills) placed in the valley bottoms since the 18th century. Drilling pits and archaeostratigraphic profile indicate that the waste landfills were allocated on the alluvial soil serving as construction foundations. These waste landfills are constituted of several types of debris (shells, animal bones, construction and domestic waste) and several sediments with varied granulometry, presenting, in some cases, discontinuities indicating depositional flow directions.

**Simek, Jan (University of Tennessee) and Alan Cressler (USGS)**

[109] *Why caves should not be cleaned*

Some cave conservationists have advocated reclaiming cave passages, walls, and ceilings that have been vandalized or abused by human visitors. Special targets are sites defaced by "spray-paint cavers" that often cover natural surfaces with paint and leave garbage on cave floors. While admirable in motivation, cave wall cleaning should be discouraged. In southeastern Tennessee, a rich and beautiful prehistoric cave art site, originally containing many elaborate charcoal pictographs arranged in panels, was destroyed by well-meaning conservationists who did not understand what they removed. The loss can be partly reconstructed, but much is permanently lost.

**Simek, Jan F. [67]** *see Blankenship, Sarah A.*; **[84]** *see Herrmann, Nicholas P.*

**Simmons, Alan (University of Nevada Las Vegas)**

[95] *The Curious Case of Cyprus in an Expanding Neolithic World*

Until recently, Cyprus did not figure prominently in the Near East's early prehistory. There was little compelling evidence for a pre-Neolithic presence on the island. Even the Neolithic was little more than a "foot note"-- most scholars believed that the first humans arrived relatively late (ca. 7000 B.C.). This perspective has been radically challenged, first with the documentation of Late Epipaleolithic Akrotiri Aetokremnos and now with the establishment of an economically elaborate earlier Neolithic. This paper summarizes the evidence for Cyprus being an integral part of the Neolithic world, while at the same time pointing out issues of data integrity.



**Simms, Stephanie (Boston University)**

[154] *New Views on Prehispanic Maya Foodways from the Bolonché District of the Puuc Hills, Yucatán*

The Bolonché district is often referred to as the "bread basket" of the Yucatán owing to its fertile soils, concentrated at the toeslopes and intervening valleys of the Puuc Hills. Regional subsistence models rely on this land for agricultural production in the otherwise shallow, karstic landscape of the peninsula, in spite of the lack of perennial water sources. This paper addresses the topic of prehispanic Maya subsistence strategies in the area, as revealed by ongoing paleoethnobotanical investigations. Research pertaining to household food resources at the sites of Kiuc and Escalera al Cielo is discussed, as well as its implications for management of the broader environmental context.

**Simon, Sara K. [12]** see *Berryman, Carrie Anne*

**Sims, Doug [175]** see *Gillmore, Gavin K.*

**Sinclair, Anthony (University of Liverpool) [7]** *Discussant*

**Sinopoli, Carla (University of Michigan)**

[1] *Historicizing Prehistory: Archaeology and historical interpretation in Late Prehistoric Karnataka, India*

For much of the last two centuries, the historiography of ancient India has been characterized by the production of "master narratives" that attempt, from various intellectual perspectives, to define the grand sequence of Indian history. As with all master narratives, those created for ancient India are problematic – privileging certain regions and certain kinds of temporal, political, or religious trajectories. In this paper, I use our ongoing research on late prehistoric "Iron Age" South India, a period of emergent complexity, to consider how archaeological can contribute to refining and challenging text-based historical understandings of the South Indian past.

[21] *Discussant*

**Sistrunk, Hannah [191]** see *Dyrdahl, Eric R.*

**Siveroni, Viviana (University of Pittsburgh)**

[151] *Herders, houses and households: Late prehispanic domestic organization at Huayuri*  
I report on the excavations of a domestic compound at Huayuri, a Late Prehispanic site in the Nasca area, South Coast of Peru. Based on architectural patterns and the distributions of features, artifacts and ecofacts, I delineate the number of household units that once occupied the cluster and explore the core tasks that defined those households' domestic economies. My analysis suggests that Huayuri household organization may have differed from other Early Nasca and Late Intermediate Period domestic regimes in the Nasca area. One salient difference is the role that herding played in the household economy.

**Skaggs, Sheldon**

[78] *Final Results from Lead Isotope Studies of Defixiones from Roman Carthage*

This study attempted to determine the provenance of lead used to manufacture selected defixiones in Roman Carthage. Defixiones, or curse tablets, were used to illegally influence competitive events through divine power. Approximately 90 curse tablets and 100 galena ores were collected from Tunisia for the comparison. A small subset of the 90 curse tablets were determined by electron microprobe analysis to be tablets most likely constructed of Tunisian lead. These tablets and the galena samples were analyzed by thermal ionization mass spectrometry to determine the lead isotope ratios of  $^{208}\text{Pb}/^{206}\text{Pb}$ ,  $^{207}\text{Pb}/^{206}\text{Pb}$ , and  $^{204}\text{Pb}/^{206}\text{Pb}$ . Many of the tablets appear to have been constructed from Tunisian lead, or lead with very similar isotope patterns. The conclusion is that the Romans were most likely mining galena deposits in Tunisia.

**Skinner, Anne R. [175]** see *Blackwell, Bonnie A. B.*

**Skinner, Craig E. [88]** see *Binning, Jeanne Day*

**Skrivseth, Margaret [115]** see *Spennard, Jon*

**Slater, Greg [183]** see *Gregg, Michael W.*

**Sload, Rebecca and George L. Cowgill (Arizona State University)**

[115] *Analysis of Ceramics from the Cave under the Pyramid of the Sun, Teotihuacan*  
 Ceramics from the 1978 Teotihuacan Mapping Project (TMP) test excavations in the cave are analyzed more comprehensively. Preliminary analysis of the ceramics, supported by radiocarbon dating, indicates the Teotihuacanos used the cave early in the city's history. Here, analysis of the excavated ceramics looks not only at phasing, but form and location. The excavated collection is also compared to a 1976 TMP surface collection of cave ceramics. The goal is to add insight to Teotihuacan use of the cave, both when it was used and the nature of the use.

**Slonim, Karen (University of Missouri) and Todd VanPool (University of Missouri-Columbia)**

[32] *A Syndemic Approach to Studying Disease in the Casas Grandes Region of the North American Southwest*

Southwestern archaeologists know that various pathogens and ailments such as anemia affected past people. A syndemic approach, which is based on the realization that health is a result of the holistic interaction of human behavior, different diseases, and the natural environment, holds great potential for the study of health related issues through time. Here we apply a syndemic approach to identify factors during the Medio period of the Casas Grandes region such as urbanization, increased reliance on maize agriculture, and the rise of social differentiation that would have affected the spread of diseases.

**Small, David (Lehigh University)**

[50] *Elite Networking and Incipient State Development*

Studies in Mesoamerican (epiclassic) and Mediterranean (Greek archaic) archaeology indicate that elites networking outside their own states can have a destabilizing effect on state formation. But recent work with Iron Age sites on Crete limits broad applications of this concept. While Cretan elites were well known for connections to the Near East and Egypt, and numerous connections between Cretan city-states, these networks were not destabilizing. My research indicates this active networking could not destabilize the polis, because elites did not sufficiently develop extrapolitical identities. Results are applied to dual processualism, and state formation.

[50] *First Chair*

**Small, David B. [64]** see Lutz, Shane M.

**Smallwood, Ashley (Texas A&M University) and D. Shane Miller (University of Arizona)**

[190] *A Preliminary Analysis of Clovis Biface Technology at the Topper Site, South Carolina*

The Topper site in Allendale County, South Carolina is a multi-component site with an intact buried Clovis deposit. This paper is a preliminary analysis of a sample of the biface assemblage from the site. Analyses will focus on spatial patterns of distributions associated with biface reduction, elements of the reduction sequence, and conservation of raw material in biface manufacture. As one of few stratified quarry sites in the region, Topper has the potential to inform our understanding of Clovis settlement and mobility.

**Smallwood, Ashley [88]** see Anderson, David G.; [190] see Miller, D. Shane

**Smith, Adam**

[187] *Are writing systems intelligently designed?*

To explain why people do what they do, we need to attribute to them motivating goals, knowledge, interests and reasons. We also need to describe how the world around them, in which other agents and their artifacts feature prominently, determines their behavior. Finally, we need to explain how biologically-evolved cognition supports the relevant behavior, motivations, and interactions with the environment. Accounts of the emergence of literate behavior typically focus on the first of these explanatory tasks. Focusing on the latter two encourages an alternative to the conventional view of the origin of writing as an instance of "intelligent design".

**Smith, Caitlin [121]** see Burnham, Laura

**Smith, Carley (University of Oregon), Barbara Voorhies (University of California), Douglas J. Kennett (University of Oregon, Eugene) and Thomas A. Wake (Cotsen Institute of Archaeology, University of California)**

[99] *Subsistence Change at La Zanja: A Formative Period Fishing-Farming Community on the Pacific Coast of Mexico*

Faunal remains excavated from the Formative Period coastal village of La Zanja (Guerrero,

Mexico) indicate a dietary shift from locally obtained estuarine fish and shellfish (1400-1100 BC) to a greater diversity of marine and terrestrial foods including a greater commitment to maize-based food production (800-500 BC). The timing of this shift suggests that it occurred as increasing human populations impacted the availability of local resources. We argue that this prompted the incorporation of a more diverse array of animal species hunted and harvested at greater distances from the village. It is within this context that maize farming intensified locally.

**Smith, Christy**

[51] *My People Trained Here: Perspectives on Stone Feature Age and Function*

Determining the age and function of a stone feature within an archaeological or sacred site can be challenging. Camp Guernsey, Wyoming, has many recorded stone features where age has been assumed by archaeologists as modern or associated with National Guard training. During Tribal consultation at Camp Guernsey in 2008, archaeological based assumptions of stone feature use and age was challenged by a Tribal monitor. The challenge opened up discussion among the project participants of ideas not yet considered. This paper presents the research of discussed ideas which center on stone feature use and age on a sacred feature's significance.

**Smith, Colin [4]** see Fuller, Benjamin T.

**Smith, Denise (SCAD-Atlanta)**

[109] *Stone Mountain Memorials*

Stone Mountain hovers at the edge of the modern city of Atlanta. This granite monolith has long served as a physical and visual boundary marker. Since European incursion into the area, this mountain has also served as a memorial to lost loved ones. This paper will discuss the role of Stone Mountain as a boundary marker between geographic space, but more importantly between this world and the next. Numerous memorial petroglyphs were carved into the surface of the mountain, dating as far back as 1822. These petroglyphs will be discussed in the context of place, space and time.

**Smith, Greg [90]** see Diener, David

**Smith, J. (Northwest College) and William Ringle (Davidson College)**

[68] *Floor Plans and Potsherds: A Comparison of Domestic Architecture in the Chichen Iza-Ek Balam Region of Northern Yucatan, Mexico*

In our previous studies of domestic architecture in the Chichen Itza-Ek Balam borderlands, a kind of house floor plan labeled "open-front" was interpreted to reflect a distinct ethnic identity. We argued that the layout of residential architecture can reflect ethnicity and since the houses of several communities in the borderlands were distinct from analogous architecture at both Chichen and Ek Balam, these communities featured a distinct ethnicity. In this paper, we reconsider this interpretation by closely examining the ceramics collected at domestic architecture in an effort to determine if they were residences or had a different function altogether.

**Smith, Jennifer (Washington University), Deborah Olszewski (University of Pennsylvania), Harold Dibble (University of Pennsylvania), Katherine Adelsberger (Knox College) and Shannon McPherron (Max Planck Institute for Evolutionary Anthropology)**

[184] *Artifact taphonomy on desert pavement surfaces, Libyan Plateau, Egypt*

Studies of desert pavements on the Libyan Plateau in the hyperarid Eastern Sahara provide a taphonomic context for Paleolithic artifact assemblages associated with these surfaces. While lateral immobility is strongly indicated for both artifactual and natural clasts > 5 cm in diameter, downward mixing of small (<2.5 cm) artifacts appears common. This process, presumably associated with sediment expansion and contraction during periodic wetting events, may account for the lack of small flakes noted from surface collections. Small artifacts are susceptible to significant lateral transport, potentially through creep, with the magnitude of disturbance tied to microtopographic context and possible biogenic influences.

[184] *First Chair*

**Smith, Karen [53]** see Clites, Elizabeth A.

**Smith, Kevin (Brown University), Magnus Sigurgeirsson (ISOR, Reykjavik), Michele Hayeur Smith (University of Rhode Island) and Thomas Urban (Brown University)**

[122] *Questions of fuel economy in early modern Iceland: stress and opportunity during a period of climatic uncertainty at Skogarnes, Iceland*

Investigations in 2008 at the site of Skogarnes, western Iceland, documented peat extraction

operations on a scale approaching the industrial and dating, at least in part, to the deepest part of the Little Ice Age. Using archaeological, geophysical, and ethnohistoric records, this poster explores the geographic contexts within which fuel extraction took place at Skogarnes, the role of peat extraction in the regional economy and in local household economics, and the impacts of pre-industrial fuel use on both renewable and non-renewable resources during a period of significant climatic change and variability.

[122] *First Chair*

**Smith, Kevin [122]** *see Urban, Thomas M.*; [122] *see Smith, Michele Hayeur,*

**Smith, Michael (Arizona State University)**

[1] *Just How Useful is Archaeology for Scientists and Scholars in Other Disciplines?*

I review the potential of archaeological data to make contributions to debates and research beyond archaeology and anthropology. Archaeology's long temporal span and emphasis on material culture provide the foundation for its broader usefulness. Our greatest external successes lie in the realm of human-environmental interactions over time. In the broad realm of comparative and historical social research (e.g., urban studies, economics, political science) archaeology has great potential to make contributions, but so far progress has been limited. I discuss the reasons for this, both internal (factors within archaeological practice) and external (conditions within other social and historical sciences).

[11] *Discussant*

**Smith, Michele (Research Associate Haffenreffer Museum of Anthro), Kevin P. Smith (Brown University), Michele Hayeur Smith and Thomas Urban**

[122] *Into the nest of eagles and on to the foxes' den: preliminary investigations at Gilsbakki in Hvítarsíða, western Iceland*

The western Icelandic site of Gilsbakki was the home of powerful chieftains from the late 10th through the 13th centuries AD, when its chieftaincy was absorbed by its rivals. Although it remained a wealthy farm into the 20th century, Gilsbakki never regained its regional administrative or ritual roles. Archaeological and geophysical investigations in 2008 provided the first glimpses of the site's potential for addressing questions about the rise and fall of an indigenous Icelandic elite center and for expanding our understanding of the regional and international economic integration of Icelandic households from the Viking Age to the present.

**Smith, Monica (UCLA)**

[21] *The Substance and Symbolism of Long-Distance Exchange*

Long-distance exchange is a hallmark of ancient complex societies. The exotic provenance of goods or raw materials is clearest when an object is of a recognizably non-local material or crafted in a distinctly non-local style. Archaeologists have usually interpreted these exotica to be indicative of high status because they usually are found in contexts otherwise identifiable as elite. But "exotica" may have had many meanings for ancient people. In this paper I will examine two cases of long-distance exchange to evaluate the range of potential meanings of long-distance goods: trade between Mesopotamia and Egypt, and between Mesopotamia and the Indus.

[11] *Discussant* [113] *Discussant*

**Smith, Scott (University of California, Riverside)**

[119] *Experiencing Religion at Khonkho Wankane, Bolivia: Ceramics and Architecture at a Late Formative Period Ritual Center*

This paper presents the results of recent ceramic and architectural analyses conducted at the Late Formative Period (200 BC – AD 500) site of Khonkho Wankane located in the southern Lake Titicaca Basin of Bolivia. A brief explanation of methods and analytical techniques is presented before highlighting results. The Late Formative period in this region was a time of both political centralization and dynamic ideological change and it is argued that a detailed examination of how people both practiced religion (using ceramic data) and experienced religion (using architectural data) during this time period will help elucidate processes of sociopolitical change.

**Smith, Stuart (UC Santa Barbara)**

[108] *Colonial Entanglements: "Egyptianization" in Egypt's Nubian Empire and the Nubian Dynasty*

The "Egyptianization" of Egypt's Nubian colony in the New Kingdom (c. 1500-1070 BC) and of the succeeding Nubian kingdom whose rulers became Egyptian Pharaohs (c. 750-650 BC) is typically viewed as a transfer of culture from a dominant core to a passively receptive periphery. I argue here that evidence of mixed material culture and practices represents instead the creation

of a cultural hybrid that reflects the complex legacy of Nubia's colonial encounter with Egypt. Entanglement provides a better model of cultural interaction that accounts for the agency of both indigenous and intrusive groups in the context of conquest and occupation.

**Smith, Stuart [78]** *see Herbst, George*

**Smith, Timothy (Appalachian State University)**

[64] *Ranked Collocations and Maya Dvandva: A New Interpretation of Left/Right Dichotomies in Ancient Maya Iconography*

Previous research has suggested that a left/right dichotomy has existed throughout Maya history, which has been linked to important cultural and symbolic meanings in the iconographic record. This paper seeks to expand upon current research by offering a cognitive model of ranked hierarchy based upon preferred architectural arrangements in ceremonial-precinct planning in post-Classic highland Guatemala, linguistic evidence from early colonial documents, and contemporary ethnographic research of civil-religious ceremonies and spatial orientations. New linguistic and ethnographic data may suggest alternate interpretations of preferred orders in the art historical, epigraphic, and architectural pattern histories of Ancient Maya society.

**Smyth, Michael (Rollins College) and Nicholas Dunning (University of Cincinnati)**

[185] *Aguadas and Early Water Management in the Puuc Region of Yucatan, Mexico.*

Water was a critical resource for Maya people living in a karst hill region where rainfall is highly seasonal. For water retention, the Maya exploited natural depressions, modified others, and excavated hollows to form water-holding ponds or aguadas. Importantly, aguadas can preserve a record of settlement history and paleoenvironmental materials for detecting the strategies for capturing and storing rainwater. In Puuc region aguadas are widespread but concentrate in numbers at only a few known sites. At the Preclassic center of Xcoch, a series of possible aguadas articulate with linear features (canals?) to suggest some form of early water management that may have fundamentally shaped the development of Maya culture.

**Snow, David (Cross-Cultural Research Systems)**

[13] *Through the Glaze Darkly: the decline and fall of the Rio Grande Glaze-ware traditions*

I peer through the glazes darkly to examine historical factors that contributed to the decline and demise of Rio Grand glaze-painted pottery. Demographic changes from the late 16th to mid-17th century reduced the number of villages producing glaze-wares; but European settlement created demands for pots that saw a brief surge in the production of the late styles. Colonial requirements for ceramics, unfulfilled by imports from Mexico, resulted in a substantial production by non-glaze potters for Spanish needs. Further population displacement during the interregnum and subsequent 1696 Rebellion resulted in the denouement of the Glaze-ware traditions.

**Soderland, Hilary (Boalt Hall, UC-Berkeley) [159]** *Discussant [159] First Chair*

**Sofaer, Joanna (University of Southampton)**

[177] *Educating the body: the making of warriors in the European Bronze Age*

This paper explores the embodied nature of the education of warriors in the European Bronze Age. Using a theoretical framework inspired by Marcel Mauss's work on the techniques of the body and Pierre Bourdieu's concept of symbolic violence, it explores the ways in which becoming a warrior required the acquisition of particular embodied skills. To become a warrior in the Bronze Age, it was not only important to look like a warrior, but it was even more vital to know how to act like a warrior.

**Solazzo, Caroline, Enrico Cappellini (University of York), Mary Ballard (Smithsonian Institution), Matthew Collins (University of York) and Susan Heald (National Museum of the American Indian, Smithsonian Institution)**

[118] *Fiber identification in Salish blankets by Proteomics*

This research seeks to identify the source of protein fibers in blankets made by the North West Coast Salish tribes in the 19th century and kept at the Smithsonian Institution. Oral tradition and ethnographic documents report the use of dog hair, either alone or to supplement other types of fibre, the most valuable being the wool of the Mountain goat. Proteomics, a method for peptide sequence identification by mass spectrometry, is used to assess the presence or not of dog hair, a question that has been actively debated over the years.

**Solometo, Julie (James Madison University)**

[18] *They Paint Anything They Want to Get Power From: Pueblo Kiva Mural Production from AD 1300 to 1950*

Murals painted by Ancestral Pueblo people in the 14th and 15th centuries A.D. have the potential to shed considerable light on pre-Columbian ritual practice. Breaking away from the motif-centered approaches characteristic of the last half century of scholarship, I use ethnographic observations of wall painting to determine the ceremonial significance of the images. I examine mural production as a ritual act and a technology consisting of a sequence of operations requiring objects, actions, personnel, and knowledge. Based on parallels in mural production in the historic and pre-contact periods, I suggest that murals in both eras played similar roles in religious observances.

**Somers, Bretton [18]** see *Turnbow, Christopher A.*

**Somers, Lewis [29]** see *Miller, Pamela K*

**Somerville, Andrew, Ben Nelson (Arizona State University) and Kelly Knudson (Arizona State University)**

[10] *Pre-Hispanic Aviculture at Paquime: Carbon and Oxygen Isotope Analysis of Macaw Bone Carbonate*

At the Pre-Hispanic site of Paquime, located in arid northern Chihuahua, archaeologists recovered the remains of 322 scarlet macaws, tropical parrots whose northernmost habitat is 500km to the south. In this study, carbon and oxygen isotopic analysis determines whether the Paquimeños actively bred these parrots or obtained them from distant Mesoamerican trading partners. We confirm that the Paquimeños were in fact breeding scarlet macaws, although they occasionally imported them. By confirming local macaw reproduction outside of Mesoamerica, this analysis provides new evidence about the economic and ideological interdependence of pre-Hispanic societies in the Americas.

**Somerville, Andrew [81]** see *Muñoz, Lizette A.*

**Soto, Gabriella and Lauren Schwartz (University of California, Riverside)**

[114] *Architectural Styles & Designs as Indicators of Community at the site of PVN647, Northwest Honduras*

Studies of symbolic identity expression and how they change over time have contributed to an archaeological understanding of the concept of community. Focusing on recent research at the site of PVN647 along the Chamelecon River in northwestern Honduras, this paper will discuss the building styles of a plaza group exhibiting unique construction techniques, including; intricate connections between structures, free-standing wall features, and open-sided edifices that were eventually closed. We will focus on how these distinctive architectural additions, renovations and changes over time reveal elements of not only building form and function but also a concept of community.

**Speakman, Robert (Smithsonian Museum Conservation Institute), Darrell Creel (University of Texas-Austin) and Myles Miller**

[76] *New Perspectives on Mimbres Pottery Production and Exchange*

Use of neutron activation analysis to investigate Mimbres ceramic production and exchange has progressed incrementally since the early 1990s resulting numerous revealing interpretations. Most studies, however, have failed to include all extant and relevant data. To date ca. 4000 Mimbres and Mimbres-related pottery and clay samples have been analyzed. Examination of this large dataset suggests that the production and distribution of Mimbres pottery was much more dynamic than suggested by earlier researchers thereby allowing us to offer new interpretations and research questions regarding issues of production and exchange ranging in scale from household to community levels.

[76] *First Chair*

**Speakman, Robert J. [49]** see *Iñañez, Javier G.*

**Spear, Jeffrey [18]** see *Perry, Christina*

**Spenard, Jon (University of California, Riverside) and Margaret Skrivseth (Apache National Forest)**

[115] *Mesoamerican Cave Symbolism in the Ancient US Southwest?*

This paper explores the possibility of the presence of the Mesoamerican concept of Chicomoztoc,

the seven caves of creation, in the ancient Southwest of the United States. The data come from a petroglyphic panel located on the outskirts Quemado, New Mexico, the landscape within which it is situated, and Zuni ethnographic data.

**Spencer, Darla (Cultural Resource Analyst)**

[9] *The Significance of Corncob-Impressed Pottery Found at Late Prehistoric Villages in West Virginia*

Recent excavations at Burning Spring Branch revealed pottery unlike typical Madisonville Series ceramics associated with Fort Ancient settlements. A significant percentage of the assemblage exhibited corncob impressing similar to that found in southwestern Virginia. A study of pottery from other sites in West Virginia discovered that this surface treatment was extensive. This discovery adds weight to the argument that Siouan groups migrated through West Virginia and may have inhabited the Kanawha Valley. It also suggests that further research is needed to determine associations between the precontact inhabitants of the Kanawha Valley and those in southwestern Virginia and the Ohio Valley.

**Spencer, Kaylee**

[6] *Identity and Captivity at Palenque*

This study examines the notion of personal identity at its intersection with captivity among the ancient Maya. Using the rich corpus of Classic-period sculpture from Palenque, I consider depictions of captives, while paying particular attention to faces, bodies, and the specific spatial contexts in which such representations appear. Re-examined in this fashion, I suggest that portraits of captives served important roles in encouraging equilibrium in both political and religious spheres.

**Spensley, Ellen [143]** see Moriarty, Matthew D.

**Spera, Frank [110]** see Ford, Anabel

**Spurling, Amy [161]** see Eerkens, Jelmer W.

**Spurr, Kimberly (Past Peoples Consulting), Kristin Sewell (Statistical Research, Inc.), Michael Heilen (Statistical Research, Inc.) and Rochelle Bennett (Bureau of Reclamation)**  
[43] *History, Archaeology, and Bioarchaeology of the Military Section of Tucson's National Cemetery*

A small portion of Tucson's National Cemetery was used by the military from 1862 to 1881. A new military cemetery opened when Fort Lowell was established, and in 1884 most military graves in the National Cemetery were exhumed and reinterred at Fort Lowell. SRI's excavations for the Joint Courts Complex project revealed intact burials in only a few military graves, but many graves contained artifacts and skeletal elements left behind during exhumation. This pattern has been noted at other military cemeteries and battlefields, and reflects a variety of taphonomic and behavioral factors, which will be explored in this presentation.

**Staeck, John (College of DuPage) and Matthew Shaw (University of Missouri, Columbia)**

[123] *Unstated Realities: Sociopolitical Form and Competition in Great Moravia.*

The oft-cited notion that Great Moravia (ca. 800-904 C.E.) reflects a state system is explored. Recent advances in theory as well as multi-national excavations at the center of Breclav-Pohansko suggest a multi-tiered sociopolitical structure containing parallel and sometimes competing systems of leadership and governance was employed by the Great Moravians. Rather than reflecting a coalescing state, it is argued that Great Moravia reflects a complex heterarchical organization in which competing interests from both internal and external polities created parallel structures of governance and leadership. This complexity does not diminish the significance or achievements of Great Moravian peoples.

**Staeck, John P. [123]** see Shaw, Matthew L.; [123] see Staeck, John P.; [123] see Griffiths, Weston D.

**Stahlgren, Lori (Syracuse University)**

[140] *Negotiating Boundaries: An Archaeology of Slavery in the Kentucky Borderland*

Kentucky's historic position on the border between slavery and freedom creates a unique situation in which to study slavery. Located near Louisville, Kentucky, Farmington Plantation represents a microcosm of the borderland: the edge of freedom and slavery, where the tension between North and South is played out, and where the economies of agrarianism and urban

industrialism collide. Analysis of artifacts excavated from Farmington slave contexts show how the dialectical nature of social and economic power created and tore down the boundaries of everyday relations in Kentucky slavery.

**Stahman, Patty [46]** *see Vento, Frank*

**Standen, Vivien [71]** *see Cassman, Vicki*

**Stanish, Charles (Cotsen Institute, UCLA)**

[161] *Ritual, labor and the evolution of cooperation.*

This paper builds on previous work on the evolution of cooperation in intermediate societies. The link between the evolution of complex political organizations and ritually-regulated labor is central to the emergence of complex political economies. Ritual provides the public benchmarks that tie in elite reciprocity of surplus to continued nonelite participation in complex economies of scale. These labor organizations are central to the evolution of complex cooperative groups, the basis of surplus-producing intermediate level (pre-state) societies that developed in a non-coercive cultural landscape.

[81] *Discussant*; [174] *see Williams, Patrick Ryan*

**Stark, Barbara (Arizona State Univ)**

[86] *Urban Gardens in a Tropical Lowland Capital*

Urban gardens are part of a range of state and household initiatives and have striking roles in social ostentation, symbolic representations, and the character of urban "boundaries," in addition to subsistence functions. From a comparative perspective, urban gardens in ancient cities have been given short shrift. Particularly in the dispersed urbanism of the tropical lowlands of Mesoamerica, spaces among houses figure in ideas about household kitchen gardens and food production. In the western lower Papaloapan Basin, Veracruz, Mexico, large open spaces are distributed in a ring around Cerro de las Mesas. I evaluate them as possible boundary phenomena.

[76] *Discussant*

**Steadman, Dawnie [177]** *see Cobb, Charles R.*

**Steele, Teresa [145]** *see Foutch, Amy*

**Steen, Carl (Diachronic)**

[14] *The Settlement Indians of South Carolina*

Native Americans present in the South Carolina Lowcountry at British contact in 1670 had already been weakened by disease, and soon faced even more threats. The European settlers wanted to trade with the Indians of the Southeast for furs and slave labor. Outside groups moved closer to the settlements, threatening the locals, who sought the protection of the Europeans. In the slave society of the Lowcountry they faced another danger: being mistaken (or taken) for slaves. To survive and maintain their freedom many left their Native ways behind. This paper will explore their survival, and contributions to Lowcountry culture.

[14] *see Judge, Christopher*

**Steenhuysse, Alexandre**

[184] *Lithic Raw Material Procurement and Selection Strategies during the Middle and Upper Paleolithic in western France*

Based on the analysis of published and new data, this study aimed at identifying differences and similarities in the way lithic raw materials were procured, selected and used in western France from the end of the Middle Paleolithic to the end of the Upper Paleolithic. The identification of techno-economic shifts within the different lithic industries was further investigated using other lines of evidence to construct exploratory models regarding the differences between the studied techno-complexes.

**Steinbach, Penny (The University of Texas At Austin)**

[6] *Reconsidering the Jester God*

The Jester God is a Classic Maya headband ornament. Scholars have long recognized it as an emblem of a ruler's sovereignty, and as an iconographic motif with many variants. Formally, it is a head sprouting vegetation and, depending on the example, its face may be piscine, anthropomorphic, or avian. In studies of the motif, however, this formal variety is usually taken for granted, even though doing so encourages incredulity and neglects semantic details. My analysis



of the Jester God distinguishes its three primary variants and cites iconographic and hieroglyphic evidence confirming their equivalency as emblems of sovereignty.

**Steinen, Karl (Anthropology/University of West Georgia)**

[56] *Snakes and Corn? A Proposed Model for the role of corn in the prehistoric Southeast*

In this paper I propose that there is a link between the cycling of prehistoric cultures in the interior of the Southeast and the role of corn. I argue that corn is symbolically represented by snake images and originally was used as a ceremonial food during the Woodland. With the development of Mississippian societies corn transitioned to a food of the masses but did not lose its symbolism..

[56] *First Chair*

**Steinhilper, Judith [52]** *see Wymer, DeeAnne*

**Stelle, Lenville (Parkland College) [109]** *First Chair*

**Steponaitis, Vincas (UNC-Chapel Hill)**

[42] *Prestige goods or inalienable possessions?*

Finely crafted objects at Mississippian centers have often been regarded as prestige goods, which were given as gifts or exchanged in social transactions designed to build alliances and to enhance prestige. Focusing on one such class of objects, I argue that carved stone palettes were ritual gear kept in bundles, which suggests that they could not have been exchanged or freely given as gifts. Their abundance at Moundville suggests many practitioners of this ritual lived there. Moreover, their widespread distribution suggests Moundville was a place of pilgrimage, where elites from distant places traveled to acquire ritual knowledge and power.

[42] *Second Chair* [42] *Second Organizer*; [42] *see Welch, Paul D.*; [42] *see Scarry, Margaret*

**Stevens, Nathan (UC Davis)**

[44] *How Should Evolutionary Theory be Incorporated into Lithic Analysis?*

Human behavioral ecology and cultural evolution are related theoretical approaches with obvious applicability to the problems that occupy lithic analysts. While each has its strengths, neither adequately replaces the elegant, though decidedly less formalized cultural ecology of Steward. In order to use the methodological advances of lithic analysis to understand prehistoric human behavior, a perspective incorporating technology as well as behavior and history as well as process is necessary. Recent studies of lithic technology from the Early and Middle Holocene of California are presented as an example of how current and past evolutionary theory can inform models of lithic technology.

**Stevens, Stanley [130]** *see Wolverton, Steve*

**Stevenson, Christopher M. [147]** *see Mulrooney, Mara A*

**Stewart, R. Michael [53]** *see Messner, Timothy Charles*; [116] *see Cushman, R. Dustin*

**Stewart, Sarah T. [155]** *see Banning, Edward B.*

**Stika, Hans-Peter [138]** *see Stobbe, Astrid*

**Stinchcomb, Gary [53]** *see Messner, Timothy Charles*

**Stiver Walsh, Laura (INAH - Oaxaca)**

[24] *Monumental Architecture at a Mixtec Capital and Postclassic States in Oaxaca*

Survey and excavations at the Mixtec capital of Teposcolula have yielded new information on Postclassic monumental architecture and late prehispanic states in Oaxaca. Recent investigations focused on a major platform outside the site core yet holding the center's largest mound. These finds are the starting point for examining the role and context of this focal architectural zone and others at Teposcolula, and consideration of the temple-patio-altar pattern identified elsewhere in Oaxaca. Comparisons with monumental architecture at other Mixtec capitals and in the Zapotec Valley of Oaxaca highlight variability among Postclassic kingdoms and inform models of late prehispanic political structure.

**Stobbe, Astrid, A. J. Kalis (University Frankfurt Main), Hans-Peter Stika (University Stuttgart-Hohenheim) and Holger Rittweger (Büro f. Landschafts- und Paläoökologie, Waldbrunn, Germany)**

[138] *Holocene floodplain evolution of the Sizandro valley (Portugal) - Part 2: Vegetation*

The combined palynological, archeobotanical and micropaleontological analysis prove the existence of a lagoon system with brackish water conditions. The palynological and macro-remain analysis of the sediments - dating around 5500 BP - allows an insight into vegetation conditions in this area. The lagoon system was situated in a landscape of oak woodland, mainly deciduous. In the open woods many shrubs and herbaceous taxa, known from recent anthropogenic macchia, were already present. An anthropogenic influence is likely.

**Stockdell, Eric (Indiana University)**

[19] *Late Classic Households at Xuenkal, Yucatan, Mexico*

Excavations conducted at a Cehpech residential structure (FN496) at Xuenkal explore the nature of economic activity at the site during the Late Classic (A.D. 600 - 900) occupation. Located long the rim of a prominent rejollada, FN496 was most likely related to the utilization of these dry sinkholes for agricultural production. The intensification of agricultural production at the site may have influenced economic growth at Xuenkal during the Late Classic. The nature of household level social organization at Xuenkal and the role of smallholders during this period of economic growth are examined to increase our understanding of households at Xuenkal.

[19] *Second Organizer; [19] see Alonso-Olvera, Alejandra*

**Stockett, Miranda**

[169] *The Slipperiness of Boundaries: Identity and Interaction in west-central Honduras*

Robert Sharer's studies of large- and small-scale cultural and dynastic developments among the Maya are central to his contribution to Mesoamerican research. Here, however, I emphasize the impact of his earlier work at the edges of the Maya world. Sharer's research in El Salvador and Honduras lent momentum to a flourishing of interest in those peoples dwelling along the borderlands and the long-running debate about the nature of their relationship with their Maya neighbors. With Robert Sharer's early contributions as a solid foundation, I explore the forging of identities and socio-political interactions in the multi-ethnic landscape of west-central Honduras.

[114] *see McFarlane, William J.*

**Stockton, Trent (Tulane University)**

[19] *Results of Archaeological Survey in the Xuenkal Hinterlands*

Results of Archaeological Survey in the Xuenkal Hinterlands. In an effort to better define the nature of the polity centered at Xuenkal, Yucatan, archaeological survey and mapping was conducted in an 11.5 km transect connecting Xuenkal's periphery with the outlying center of Dzadz Naranja. Survey efforts within the transect focused on: (1) the location and mapping of nucleated settlements, making use of local informants and settlement signatures suggested by analysis of satellite imagery, and (2) the location and mapping of all signs of ancient settlement visible in cleared ranch pastures and burned milpas. Survey results indicate that the region between Xuenkal and Dzadz Naranja consists of several nucleated settlements that contain both Cehpech sphere and Sotuta sphere ceramics and provide significant new information about regional settlement patterns related to the rise of Chichen Itza as a major center in the northern Maya Lowlands.

[19] *Second Organizer; [19] see Alonso-Olvera, Alejandra*

**Stodder, Ann (SWCA)**

[87] *Variation, Identity and the Visible "Other" in the Prehistoric Southwest*

As a socially constructed entity the skeleton embodies both social practice and biological status in prehistoric societies. Ancient DNA, isotopes and biodistance studies illuminate migration and marriage patterns, but not the degree to which people looked different to each other. Which phenotypic traits constituted "otherness" in the past? This study addresses visible physical variation -- in stature, robusticity, facial features, dimorphism, dental and cranial modification -- among prehistoric residents of the Southwest, and asks which variation reflects deliberate construction of individual or group identity, and the ways in which physical variation might have impacted the interaction of groups and individuals.

**Stoll, Marijke**

[99] *Space and Sacrifice in the Mexica Social World*

Sacrificial practice among the Mexica has been analyzed from a range of theoretical perspectives, from functionalist interpretations whereby sacrifice is a mechanism for population

control to more idealist explanations utilizing religious theory related to sacred/profane and time/space dichotomies. However, such concepts did not exist in Mexica thought as they do in the modern world. This poster attempts to move space to the forefront of discussion, arguing for sacrifice as a spatial practice, constitutive of the Mexica social world and of political authority as well. For the Mexica, ritual human sacrifice created and renewed physical, social and cosmological space.

**Stoltman, James [63]** see *Doumani, Paula N.*

**Stone, Benjamin [53]** see *Workman, Terry W.*

**Stone, Elizabeth (Stony Brook University)**

[11] *Mesopotamian Settlement Structure: The View from Space*

In southern Mesopotamia differential humidity and salt levels sometimes allow the tracing of sub-surface mud-brick architecture. This paper will use the some 250 ha of architecture visible within surveyed areas within the southern alluvium to investigate the variety of architectural forms exhibited within both urban and rural sites to focus on key questions regarding Mesopotamian settlements: organizational similarities and differences between sites of different sizes and dates, differential house sizes both between sites and within sites, and the distribution of ziggurats, temples, large public buildings, fortification walls, canals and harbors within sites, both large and small, early and late.

**Stoner, Michael [14]** see *Norris, Sean*

**Stoner, Wesley (University of Kentucky), Maria del Carmen Rodriguez (Instituto de Antropología e Historia) and Zenaido Salazar (Instituto de Antropología e Historia)**

[148] *Olmec and Epi-Olmec Burials at Tres Zapotes*

Excavations conducted as part of the Proyecto Arqueológico de Tres Zapotes revealed six burials that provide an exceedingly rare corpus of information on Olmec and Epi-Olmec mortuary practices and health. Four of these interments (2 adults and 2 children) were excavated from a single residential context located between Mound Groups 1 and 2. An isolated cache of miniature ceramic vessels was also recovered here that resembled offerings in a nearby infant burial. Another adult was found interred atop a sandstone formation a short distance away. The final adult was located north of Mound 9: part of Mound Group 2. In total, these graves and their offerings provide a diachronic perspective of mortuary programs, wealth, and health associated with 'middle-to-upper' class residential barrios at Tres Zapotes from the Early Formative through the Early Classic. This paper will describe the context and form of the burials as well as their material offerings. The Tres Zapotes burials are then compared to available mortuary data from contemporaneous settlements elsewhere in southern Veracruz.

**Stoner, Wesley D. [99]** see *Venter, Marcie L.*

**Storey, Rebecca (University of Houston)**

[1] *Urban Health from Prehistoric times to a Highly Urbanized Contemporary World*

Cities are recent in human history and present a new environment because of more population density. Archaeology and history reveal that cities varied greatly among different societies, but have similarities in health risk. History reveals that as population density increased, health declined and mortality increased until the 20th century. Prehistoric Mesoamerican urban populations, Teotihuacan and Copan, will be compared to the preindustrial cities of London and Rome to indicate how humans had to adapt to a new disease and morbidity environment. The health situations of contemporary cities will be compared with that of the past to highlight differences and similarities.

**Stosel, Victoria (California State University, Los Angeles)**

[129] *Sea Urchin, Food of Elites Prehistoric, Historic and Modern?*

Sea urchin provides a smaller meat package than many intertidal species of shellfish. The low meat yield should make sea urchin a low priority food choice. Nevertheless, shell middens around the world contain high densities of sea urchin shell, indicating heavy aboriginal utilization. In addition, sea urchins are also found in places of ritual significance, such as the Sanctuary of Demeter and Kore located on the Acrocorinth, Greece and a burial cave in the Aleutian Islands. This paper reviews the variety of contexts in which urchins are found and reassess their unsuspected importance.

**Stout, Charles (Ann Arbor Hands-On Museum)**

[82] *Seeking a Functional Grammar of Modern Museum Design: An Archaeological Perspective*  
As museums seek to increase their relevance to their constituencies, they risk becoming something these constituencies neither recognize or value. Extending concepts developed while investigating prehistoric architectural elements under the direction of R. Barry Lewis, I have since examined places built and occupied by modern institutions to identify inconsistencies between idealized and actual operations. Presently, I am focused on delineating a design grammar of modern museums. In the context of topical, local and regional understanding of what constitutes museums and what role they play in communities, I will present some observed patterns and explore their anthropological implications.

**Stout-Evans, Rachel [98]** *see May, Jared David*

**Stovel, Emily (Ripon College) and Michael Deibel (Earlham College)**

[71] *Characterizing Ceramics from San Pedro de Atacama, northern Chile, Using Portable X-Ray Fluorescence (pXRF).*

There is difficulty working with cosmopolitan burial collections in the South Central Andes because of the lack of centralized knowledge of regional ceramic types. A current project seeks to complement regional stylistic classifications with chemical characterization via X-ray fluorescence. This paper reports on the characterization of ceramics from San Pedro de Atacama, northern Chile. pXRF was used on 122 ceramic sherds and 22 obsidian artifacts. The results of this analysis will facilitate the identification of non-local vessels in local contexts (or distinguish local vessels fabricated according to non-local stylistic norms) and support more complex models of regional social integration.

**Stovel, Emily [130]** *see Burghardt, Lucy*

**Straughn, Ian (Brown University)**

[141] *Putting an end to the iconoclastic past: The logics of heritage preservation in contemporary Egypt*

The story of imperial powers dynamiting monuments, exhuming numerous corpses and carting their treasures off down the Nile in order to fill curiosity cabinets, museum display cases and storerooms across the globe, is well known. In part these actions would be justified as countering the threat posed to Egyptian archaeological heritage by destruction at the hands of iconoclasts and ignorant peasants. The emergence of controlled excavation and legal frameworks for archaeological practice did little to resolve the irony of this situation. The destructive forces of preservation continue to serve as the curative to the now iconic figure of the sebakhin or the Muslim fanatic intent on the defacement of an un-Islamic past. This paper explores the logics of this preservationist impulse in order to question why ruins can no longer be tolerated as such. I contend that these logics are not dissimilar to those employed in certain acts of iconoclasm. Using the example of recent developments in the historical preservation of Islamic Cairo/Fustat I argue that much is lost by this new composure towards the material traces of the past which have been ushered in through the cultivation of a particularly secularized heritage sensibility.

**Stravopodi, Eleni [130]** *see Prevedorou, Eleni Anna*

**Strawhacker, Colleen (Arizona State University)**

[164] *Regional Dynamics of Animal Resource Use across the American Southwest: Understanding Vulnerabilities during Social Transformations*

Different patterning of prehistoric animal use across the American Southwest can be a product of a number of driving forces. For example, overhunting and habitat change are products of human impact, while elevation and water availability affects species composition. Essential to understanding the regional dynamics of animal use is the exploration of these factors that affect what is observed in the archaeological record. This paper will explore different variables of faunal data from the Mimbres and Zuni regions from AD 800 – 1400 in order to explore how faunal use changed during prehistoric social transformations (ie. Classic Mimbres to Reorganization Phase).

**[164]** *First Chair*

**Streit, Tiffany [192]** *see Hansen, Gregory J.*

**Strezewski, Michael (Univ. of Southern Indiana)**

[17] *Ritual Use of Limestone Pavements at Mortuary Sites in Illinois*

Recent reanalysis of mortuary excavations indicates the presence of a distinct class of ritual-related features at a number of Late Woodland through Late Prehistoric sites in Illinois. These

features consist of a pavement constructed of limestone slabs, surrounded by primary and secondary burials. The platforms do not appear to be the floor of a charnel house, in the sense of an above-ground house-like structure. Rather, they seem to represent features used for the open-air storage and possible processing of human remains. The following paper examines the distribution, construction, and use of these features within their ritual context.

**Stringer, Michael [155]** *see Macrae, Scott A.*

**Suárez, Sergio (Instituto Nacional De Antropología E Historia (INAH))**

[20] *Arqueología y antropología en la Malinche*

Arqueología y antropología en la Malinche Sergio Suárez Cruz Con el objeto de obtener datos sobre la antigüedad de las evidencias del culto a los cerros y a las deidades del agua que desde la época prehispánica y hasta la actualidad, rinden a la montaña los vecinos de las comunidades cercanas a la Malinche, montaña ubicada entre los estados de Puebla y Tlaxcala, México, realizamos excavaciones en el cráter Tlalocan y posteriormente en su cúspide. En nuestro trabajo trataremos de mostrar cómo aún en la actualidad los vecinos de las comunidades asentadas en torno a la montaña conservan y reproducen en su vida diaria relaciones similares a las que antaño mantenían con la Malinche.

**Sugandhi, Namita (CUNY - Lehman College)**

[113] *Conquests of Dharma and Networks of Social Power in Early Historic India*

The idea that early states and empires may have been of limited cohesiveness territorially is certainly reflected in our contemporary understanding of the Mauryan Empire, a 4th-2nd century BC empire whose borders are often demarcated by a series of inscriptions found across the Indian subcontinent. Although these inscriptions do make reference to conquest, there is little to suggest that these statements refer to explicitly territorial conquests. This paper presents a case study which explores the concept of Dharma Vijaya or "conquest by Dharma", and examines the networks of relationships through which the Mauryas may have exerted social power across both space and time.

**Sugerman, Michael (UMass Amherst)**

[108] *A Networked Interface on Egypt's Levantine Frontier*

Egypt's relationship with its neighbors to the north and south during the New Kingdom (1550-1070 BC) is usually defined as imperial, emphasizing Egypt's exploitation of the resources and trade routes in Nubia and the southern Levant. While the archaeological evidence for Egyptian colonial imperialism is very clear in Nubia (modern Sudan), it is much less so in Canaan (modern Israel and Palestine). In this paper I assess the political economy of second millennium BC Canaan and the extent to which that structure can be seen as a response to Egyptian domination.

[108] *First Chair*

**Sugiyama, Nawa (Harvard University) and William Fash (Harvard University)**

[182] *Reinterpreting the Copan Felines*

At least 15 felids were interred in an offering cache associated with Altar Q at Copan. Previous analysis by Diane Ballinger has concluded that the felids sacrificed for this offering were jaguars dedicated to the royal ancestors. However, this paper questions the taxonomical identification of these felids and examines the diverse taphonomical processes that altered this collection. Such detailed zooarchaeological investigation has led us to believe that at least 2 species of felids were interred in this offering cache, some of which show diverse alterations on the bones suggesting these materials may have included individuals that were secondarily interred.

**Sugiyama, Saburo (Aichi P. University/ASU), Ivan Hernandez (Estudios Mesoamericanos, Facultad de Filosofía y Letras, UNAM), Shigeru Kabata (Instituto de Investigaciones Antropológicas, UNAM) and Tenoch Medina (Instituto Nacional de Antropología e Historia/Proyecto Templo Mayor)**

[38] *Reinterpreting Mexica Sacred Space with a New 3-D Map of the Tenochtitlan Precinct*

A detailed 3D architectural map of the Templo Mayor complex was elaborated in 2007-8 with the total station and a 3D vivid scanner to systematically and precisely record overlapping constructions uncovered since 1978 to date. Isolated architectural complexes explored by salvage projects as well as the recently discovered Tlaltechtlil monolith and its associated offering complexes were also integrated in this general map. Based on this newly created 3D map, we demonstrate seven overlapping architectural levels, define limits of the sacred precinct once described in codices, and discuss the socio-political implications of changing city's monuments digitized and reconstructed precisely.

**Sullivan, Anne Lise (Indiana University)**

[17] *Bioarchaeology of Historic Angel Mounds State Historic Site, Vanderburgh County, Indiana*  
This paper presents the results of research made possible through the generous guidance and support of Dr. Chris Peebles. As director of the Glenn A Black Laboratory, Dr. Peebles continues to contribute considerable time, insight and resources into better understanding the history of Angel Mounds State Historic Site in Evansville, Indiana. This current paleopathological analysis of remains from eighteenth century Angel Mounds illustrates patterns of well-being as impacted by chronic stressors such as malnutrition, disease and physical labor while also contributing to the growing body of literature on Angel Mounds generated under the tutelage of Dr. Chris Peebles.

**Sullivan, Grace**

[130] *Learning more about the tools to learn the tricks of the trade. An examination of textile workbasket contents.*

Containers with samples of and implements for textile production are commonly referred to as workbaskets in Andean archaeology. The assessment and survey of public collections and known baskets from published private sales will provide an account of their number and their varied contents. Analysis of spindle and spindle whorl composition design types and variation among the inclusion of content ecofacts will be made to one basket in the collection of Burke Museum of Natural History and Culture at the University of Washington.

**Sullivan, John [98]** *see May, Jared David*

**Sullivan, Lynne, Bobby Braly and Shannon Koerner**

[142] *Revisiting Mississippian Chronology in East Tennessee: The Radiocarbon Reality*  
Many Mississippian sites in East Tennessee were excavated during the 1930s before the advent of modern absolute dating techniques. Numerous models of sociopolitical organization have been proposed for these sites, but without knowledge of the sites' actual chronological placements. New AMS dates and dendrochronology data shed light on the timing of the occupations for many sites. These data also show the need for further refinement and revision of proposed models. We present a new array of dates, their contexts, and relevance to previous interpretations. We also show how the revised chronology for these sites relates to chronologies from adjacent regions.

[37] *Discussant*

**Sullivan, Vanessa [30]** *see Dost, Sarah L.*

**Sumner, Alexandra [49]** *see Riddle, Andrew T.*

**Sun, Yan (Gettysburg College, PA)**

[62] *The Changing Meanings of the Willow Leaf Shaped Sword in Western Zhou China*  
The willow leaf shaped sword, a unique type of bronze weapons, has been found in noble tombs of the Western Zhou period (mid. 11 c. BCE - 8 c. BCE) in the Yu state cemetery and other five locations across northern China. By examining its placement and association with other bronze artifacts in mortuary context, this paper suggests that the willow leaf shaped sword was likely introduced from the Yu state to other regions in various ways, and its original meanings have been altered by the receiving communities.

**Sundstrom, Linea (Day Star Research) [84]** *First Chair*

**Sunseri, Charlotte (University of California, Santa Cruz)**

[143] *Trading Spaces: Economic Landscapes of Precontact California*  
Archaeology of Central California's greater Monterey Bay area reveals economic and social dynamics that characterized hunter-gatherer groups at the onset of the Medieval Climatic Anomaly (AD 800-1400). To understand these cultural dynamics during climate change, this synthesis of CRM data from 55 sites integrates settlement data with results from zooarchaeological, archaeobotanical, lithic, and shell bead analyses to describe regional mobility, territorial organization, and economic exchange patterns. Spatial analysis of material distributions elucidate who was involved in trade relationships (elites vs non-elites), how the exchange was facilitated (e.g. central place exchange, redistribution, etc.), and which materials were prestige goods or wealth items.

**Sunseri, Jun (University of California)**

[8] *Good Buffers Make Good Neighbors: Traumatic practice on New Spain's northern frontier*  
How did people make a home out of a warzone? Within their fortified plazas, New Mexicans lived in mixed communities under the pressures of the sistema de casta, a socioracial hierarchy based on perceptions of blood purity. Just outside the walls, tensions with nomadic slave raiders, poised to strike at any moment, maintained a baseline of fear. Rather than fall back on one, static model of social performance to mitigate these tensions, one colonial community seems to have mobilized an eclectic mix of ethnic, class, and gender roles to keep both their enemies and their colonial administrators guessing.

**Surface-Evans, Sarah (Michigan State University)**

[40] *This Way or That Way: Hypothetical Least-Cost Models of Regional Interaction Among Shell Mound Archaic Settlements in the Central Ohio Valley*

Shell Mounds Archaic sites are commonly cited as the inception of a long-term shift towards subsistence intensification and increasing sedentism in the Midsouth. The goal of this study is to gain an understanding of the complex decisions determining Shell Mound placement and long-term reuse using hypothetical least-cost models. This method explores potential patterns of interaction between Shell Mound sites within the Ohio Falls region. Least-cost derived corridor models are compared with the locations of other reported Archaic sites and potential resource extraction areas in the uplands. Issues of temporal site contemporaneity on modeling is also discussed.

[40] *Second Chair*

**SurrIDGE, Evan (UNC-Chapel Hill)**

[121] *Making, Trading, and Breaking Stone Hoe Tips at Cerro Leon on the North Coast of Peru*  
Excavation and surface collection of three residential compounds at Cerro Leon has resulted in the recovery of over 1000 whole or broken stone hoe tips and over 100,000 pieces of debitage. The hoe tips are large, corner-notched bifaces, most of which have well-developed edge and surface polish indicative of use as hafted agricultural tools. The massive quantity of lithic material indicates the compounds were important loci of tool maintenance and discard. This suggests noble families at Cerro Leon played an important role in the exchange and use of hoe tips in the Moche Valley, but the dynamics of production remain a subject for ongoing research.

**Sutter, Richard (IU-PU Fort Wayne)**

[15] *The (Mis)use of Analogy in the Interpretation of Moche (AD 200 – 750) Warfare*  
Moche conflict is often interpreted through the lens of iconographic interpretations of combat between warriors and ethnographic or ethnohistoric analogies of kamay and tinkuy ritual battles. However, the interpretations of Moche conflict based upon these kinds information represent simple analogies and the logical conclusions and relevance assumptions are unwarranted, especially when considered in light of the available archaeological and bioarchaeological data. Within this paper, I present new biodistance analyses and explore additional ethnohistoric analogies to suggest that Moche warfare represented conflict between competing north coast polities, rather than strictly ritualized staged battles between Moche elite.

[45] *Discussant*

**Swanson, Steve (Arizona State University)**

[18] *Ecosystem observation informed land use decisions of early farmers in the Mimbres region of southwest New Mexico*

Human landscape use is a complex system of resource monitoring, selection, and impact linking people to environments. I tease these apart through an integration of archaeological and ecological data. Ecosystem response of pithouse site environments suggests that by the Georgetown phase (AD 600s), Mimbres farmers discerned subtle ecological differences in similar environmental settings. They incorporated that knowledge into land-use decisions: large, long-lived settlements were built in settings resilient to short-term climate fluctuation; smaller, temporary settlements took advantage of enhanced productivity following wet intervals. Local decisions and actions about appropriate agricultural strategies in different settings supported sustainable regional occupation.

**Swarts, Kelly (Northern Arizona University)**

[18] *Proposed Guidelines for Accurate Identification of Archaeological Softwood Taxa, particularly Douglas-fir (*Pseudotsuga menziesii*)*

A variety of physiological, environmental, and cultural factors constrain the types of plants that people use. In the southwestern United States, accurate identification of conifer taxa is of

particular importance because high elevation conifers are most often of a non-local origin but are morphologically similar to local softwood taxa, most notably Piñon (*Pinus edulis*) and Juniper (*Juniperus* spp.). I examined softwood taxa using both high power (>150X) and low power (50X) microscopes in order to produce guidelines for wood analysts to determine when low power magnification is sufficient and when additional magnification is required for accurate identification.

**Sweeney, Alex (Brockington & Associates)**

[14] *Understanding the Yamasee Indians at Altamaha Town*

The Yamasee, a multiethnic conglomeration of Native Americans, lived along South Carolina's lower coastal plain between 1683 and 1715. Archival documentation has provided information regarding Yamasee ethnohistorical origins, political structure, relations with English traders, and archaeological site locations. Recent excavations at Altamaha Town, the capital of the Lower Yamasee Indians, recovered a substantial artifact assemblage and identified numerous cultural features associated with several structures. Historical documentation and excavation data from Altamaha Town permitted a more concrete perspective into the lifeways of the Yamasee. This paper discusses field investigations, research of the collected data, and initial interpretations from the excavations.

**Swenson, Edward (University of Toronto)**

[15] *The Ritual and Political Efficacy of Moche Warfare*

Moche iconographic depictions of combat are suffused with religious meaning and formed part of complex cosmological narratives. The juxtaposition of ritual space and defensive constructions at ceremonial settlements in Jequetepeque further indicates that intra-valley hostility was inextricably tied to religious practice. I argue that pragmatic military campaigns among the Moche were conditioned by ideological structures of "ontological predation," or destructive regeneration, a deeply embedded cultural principle in the Andes that directly shaped political and economic conflict in Andean prehistory. A consideration of Moche structures of practice reveals that Moche warfare cannot be categorized as exclusively ritualistic or secular in nature.

[15] *First Chair* [15] *Second Organizer*

**Swope, Karen (Statistical Research, Inc) and R. Scott Plumlee (Statistical Research, Inc.)**

[43] *An Anthropology of Evolving Land Use Values: Residential and Commercial Development in Downtown Tucson, Arizona, 1890-2008*

Archaeological investigations in downtown Tucson, Arizona, revealed important data regarding residential and commercial development beginning in the late 19th century. The area studied was situated atop a former cemetery, and consideration is given to the changing social values and economic forces driving land use in the American Southwest at the turn of the twentieth century. Within one decade after cemetery abandonment, a residential zone had developed on the site. Sixty years later, the residential zone had evolved into an exclusively commercial one. The roles of multicultural society and proximity to the railroad in the development of the Southwest are explored.

**Szenthmiklosi, Alexandru [74] see Papalas, Christopher A.**

**Szremski, Kasia (Vanderbilt University)**

[60] *Economic Exchange and Cultural Contact in the Late Intermediate Period: the view from Rio Huanangue*

Understanding coastal-highland relationships is vital to understanding the development of the complex and regionally diverse political landscape of the Late Intermediate Period (1200-1450 AD). Unfortunately, studying interactions between different regions can be difficult heavy boundaries tend to be drawn across major ecological divides. Preliminary survey data from the Rio Huanangue, paired with GIS based landscape analysis, point to the existence of complex economic and political relationships between highland (Kayash) groups and coastal (Chancay) groups. Understanding the nature of these relationships provides important insight into the political landscape of the North Central Coast of Peru during the Late Intermediate Period.

**Tainter, Joseph (Utah State University)**

[1] *Energy Gain and Organization*

Energy gain is net energy, also known as Energy Returned on Energy Invested (EROEI). Energy gain constrains resource use, social organization, and landscape organization in human and other living systems. Changes in energy gain have common consequences across living systems. Describing these consequences in selected case studies (fungus-farming ants and imperial taxation) clarifies certain aspects of how living systems evolve in their organization, and allows



the formulation of hypotheses concerning sequences of resource use, efficiency of use, extensification vs. intensification, investment in organization, chance and intentionality, duration of system persistence, and other factors.

**Takamiya, Hiroto (Sapporo University)**

[167] *The Landscape Changes in the Prehistoric Okinawa Islands, Japan*

Archaeological research from the Oceania, Caribbean, Mediterranean, and other islands indicates that whenever human population adapted islands, they greatly modify the environment of the islands. In other words, their impacts on the island environments were enormous. While the islands of Okinawa is well known for the yielding late Pleistocene skeletal remains, *Homo sapiens* successfully colonized the islands probably for the first time during the mid-Holocene. Did they impact the environment of Okinawa islands? Did they modify the environment tremendously like other island colonization cases? This presentation will attempt to examine human impacts on the islands of Okinawa during the prehistoric time.

**Taliaferro, Matthew [18]** see *Toney, Elizabeth M.*

**Taneja, Anand (Columbia University)**

[141] *'What grace lovers find from idols': The Ambivalence of Idols in Indo-Muslim Poetics.*

What does it mean to invoke the removal of idols from the Kaaba, one of the originary moments of Islam, in a land of idol-worshippers? And that the Arabic word for idol also means 'beloved' in Urdu? The ambivalence of language indicates a more complex history than the unrepentant iconoclasm often attributed to Islam in India. In this paper I will seek to engage the presence of idols in contemporary Muslim poetry and medieval Sufi texts to indicate not just 'tolerance', but a deep historical engagement of Muslims with the question, 'what is it that idols do?'

**Tankersley, Kenneth (University of Cincinnati)**

[67] *Caves, Clovis, a Comet, and Climate Change*

Sheriden Cave, Wyandot County, Ohio, is the twelfth firmly dated Clovis site in North America. The Clovis stratum dates to the late Allerød and is overlain by a stratum, which contains direct positive evidence of a Younger-Drays extraterrestrial impact including magnetic grains with distinctive carbon and magnetic spherules, microdiamonds, and lonsdaleite. Although this horizon coincides with the extinction of Rancholabrean fauna, there are no significant changes in arboreal vegetation, fish, amphibians, reptiles, bats, and birds. While a few artiodactyls, small carnivores, and rodents shift their range to the north, the biogeography of most mammals remains unchanged.

[174] see *Ballantyne, Marianne R.*

**Tartaron, Thomas (University of Pennsylvania) [63]** *Discussant*

**Taylor, Erin (University of So. Maine) and Nathan Hamilton (University of Southern Maine)**

[53] *Prehistoric and historic fishing in the Gulf of Maine*

Fish bones from prehistoric and historic excavated contexts in the central Gulf of Maine are presented to assess size, age and season of exploitation. Detailed metric analysis of precaudal vertebrae, premaxilla and otoliths reveal trends in demography and utilization from 4000 B.P. until A.D. 1912. Ten sites with good stratigraphic resolution and well dated chronologies reveal demographic leveling in the recent historic past. Special attention is paid to a comparative analysis of two historical sites: an African-American shell midden on the coast of Maine and an offshore island fishing station located on Smuttynose Island, in the Isles of Shoals.

**Taylor, James (University of Washington)**

[156] *Okhotsk Migration and Animal Procurement: Isotopic Analysis in a Northeast Asian Context*

The Okhotsk people were highly mobile marine foragers with a strictly coastal settlement pattern. Between the 5th and 10th centuries AD the Okhotsk people spread from Sakhalin Island, around Hokkaido, and throughout the Kuril Islands. By the 12th century AD the Okhotsk people retreated back into Eastern Hokkaido where they were absorbed by neighboring groups. Here I present strontium, lead, oxygen, and carbon isotopic data from Okhotsk human and animal teeth to investigate the nature of Okhotsk migration, the point of procurement for their two unusual familiars, pig and bear, as well as pig feeding practices and domestication.

**Taylor, Marybeth (Univ. of West Georgia), Armando Tovar (University of West Georgia), Meggie Dunnivent (University of West Georgia) and Thomas Foster (University of West Georgia)**

[53] *Etowah Indian Household Economy During the Lamar Period*

The Etowah Indian Mounds are located in Bartow County, GA. This archaeological site is a representation of the Mississippian culture. This research will examine the burned structure of a Native American Indian house occupied during the Lamar Period (AD 1550). It will focus primarily on analyzing excavated artifacts from the floor of this structure and will concentrate on a single household economy to gain more insight into the lifeways of the Etowah Indians during the Lamar Period.

**Taylor, Sarah (University of Pittsburgh)**

[130] *Social Complexity and Conditions of Change at El Dornajo, Southwestern Ecuador*

We still know very little about the response of communities in prehistory to either environmental hazards or changing geopolitical conditions, especially as to how those responses might have affected the developmental trajectory of such communities. The site of El Dornajo, El Oro province, Ecuador was investigated with the goal of counterpoising the role of these conditions on social change and development in the region. Preliminary results indicate that a large El Niño event and increased interaction in trade systems both occurred at the site in proximity to increased hierarchical activity. This poster presents those data and discusses their relevance to the questions stated above.

**Taylor, Sean [14] see Judge, Christopher**

**Taylor, Timothy**

[69] *Time Team UK: 16 years of televised archaeology*

As Professor for the public understanding of Archaeology at Bristol University and the creator and Series Producer of Time Team I would like to provide both an overview of TimeTeam's achievements and give a summary of the archaeological response and challenges. The role of Time Team in independently funding over 180 excavations, 50+ on scheduled sites, has created a resource for archaeologists that has not only evaluated, at no cost to public funds, a vast number of sites but also "transformed the public's view of archaeology." Balancing the needs of broadcasters with the requirements of producing high quality archaeology on some of the most important sites in Britain - Hadrian's Wall, Lambeth Palace, Salisbury and Canterbury Cathedrals, and the Queens Royal Palaces to name a few, while also liaising with statutory bodies -English Heritage, Historic Scotland etc. has created a unique body of evaluations data and experience which has now been active for over 15 years. As Time Team begins working in other countries, including in 2008 a series of 5 programmes for PBS, I am keen to explore the inter-relationship with new archeological colleagues as at the heart of Time Team has always been a partnership with the local archaeological community.

**Teague, Megan (University of Florida) and James Davidson (University of Florida)**

[54] *Personhood through Given Names: An Examination of Sentimentality and Expectation*

Naming a child is associated with sentimentality and an expectation of survival. Withholding a name until a child is beyond the infant stage is common historically and extends into the early 20th century. We examine the effect of high childhood death rates on African-American naming practices by evaluating death records and funerary ledgers from Dallas, Texas (1869-1915). In addition to a high death rate, other factors that affect name-giving are discussed.

**Teeter, Wendy (Fowler Museum at UCLA) [105] Discussant [105] First Chair**

**Tempest, Andrew [97] see Kohut, Lauren E.**

**ten Bruggencate, Rachel (University of Manitoba) and Mostafa Fayek (University of Manitoba)**

[168] *Sourcing quartz quarries from Granville Lake, Manitoba, Canada using trace elements and oxygen isotopes.*

Quartz artifacts are found at precontact archaeological sites throughout the Churchill River Basin of Manitoba and Saskatchewan. A potential source of raw material for the manufacture of these artifacts is the unusual rose, milky and smoky quartz quarry sites found throughout the basin region. We have used trace elements and oxygen isotopes to characterize several quartz quarries from the Granville Lake area of North-west Manitoba. These data will be used to reconstruct raw material provenience for quartz artefacts across the Churchill River Basin, while

methodological advances made through these analyses will be applicable to sourcing archaeological quartz worldwide.

**Tenorio, Dolores [91]** *see Jaime-Riveron, Olaf*

**Tenpas, Andrew**

[119] *A Case for Qochas as Agents of Salinization in the Titicaca Basin*

Often categorized as one of the principle methods of agricultural production during Tiwanaku governance of the Titicaca Basin, qochas and their true impact on the Andean landscape have received limited scholarly attention, at least in comparison to raised field complexes and terrace systems. However, after a direct comparison of qocha systems with both Andean and global analogues, it has become my contention that their impact on the hydrological balance of the basin may have been enormously detrimental. By contributing to processes of salinization, they may have played a role in the eventual demise of agricultural viability within the greater basin.

[119] *First Chair*

**Terry, Richard (Brigham Young University), Daniel Bair (Brigham Young University) and David Anderson (Tulane University)**

[100] *Geochemical Soil Analysis of a Possible Preclassic Marketplace and Other Features at Xtobo, Yucatan, Mexico*

The Preclassic Maya site of Xtobo, located in northwest Yucatan, Mexico, has produced an intriguing feature of unknown function. This feature covers more than 6 hectares and is surrounded by a series of sacbe-like structures. Inside of the feature only one significant structure is to be found. One possible explanation for the feature is that it served as a marketplace for Xtobo and the region. We conducted soil sampling and geochemical analysis of the feature along with an adjacent platform and the main plaza at the site center. The soil samples were tested for extractable phosphorus and heavy metals for comparison to other proposed marketplaces.

[100] *First Chair*

**Terry, Richard [100]** *see Balzotti, Chris*; [100] *see Bair, Daniel*; [100] *see Rees, Gordon L*; [100] *see Coronel, Eric*

**Tesar, Louis (DOS/DHR/BAR)**

[125] *1994-95 Excavation of Stratified Paleoindian-Early Archaic Remains at the Wakulla Springs Lodge site (8WA329)*

In 1994-95, B. Calvin Jones directed emergency archaeological salvage excavation in advance of sewer line installation at the Wakulla Springs Lodge site (8WA329). Below the modern to Middle Archaic material a stratified Early Archaic over Paleoindian zone was encountered. The Early Archaic zone included a red ochre capped cremation pit burial. The calibrated date range from the cremation feature is from 10,552-10,410 calendar years BP at one sigma. The underlying Paleoindian material, which features a projectile point and other artifacts made from bifacial cores was not dated. The tools suggest a Clovis or pre-Clovis date. Louis D. Tesar assisted Jones during the project fieldwork and coauthored the project report.

**Thacker, Paul (Wake Forest University)**

[184] *Understanding Lithic Raw Material Selection: Middle Paleolithic Assemblage Organization and Local Decision-Making*

Any middle range theory linking stone artifact assemblages to the dynamics of settlement system structure must emphasize the spatial context of raw material exploitation. Three Middle Paleolithic archaeological sites from different regions of Portugal facilitate the exploration of the influence of local raw material availability on prehistoric stone tool economies. An ecological model of chert, quartz, and quartzite availability developed through extensive geological sampling provides a secure understanding of the resource background within which past stone reduction decisions were made. Artifact assemblage variation across raw material types indicates that Late Middle Paleolithic populations in central Portugal were organized around local resource exploitation with little long distance raw material transport. Nevertheless, some preferential selection of raw material type did occur at each site, with significant choice of quartz at Vale Permego, chert at Casal dos Carvalhais, and surprisingly, quartz at Vinhas.

[130] *see Pereira, Carlos M.*

**Thatcher, Jennifer J. [88]** *see Binning, Jeanne Day*

**Thibodeau, Alyson (University of Arizona), Joaquin Ruiz (The University of Arizona) and John Chesley (The University of Arizona)**

[168] *Tracing Turquoise from Site to Source Using Radiogenic Isotopes*

We show that high-precision measurements of lead and strontium isotopes can discriminate between turquoise sources in the American Southwest and have created a database with over 100 paired isotopic measurements on samples from important turquoise mining areas. We also present isotopic analysis of turquoise artifacts found at early Basketmaker-III Puebloan sites along the Rio Grande Valley, and contemporary Hohokam sites in the Tucson Basin. In both studies, archaeological evidence for local turquoise procurement reinforces the conclusions drawn from the geochemical data. The development of this database provides a framework for the archaeological community to test hypotheses about ancient turquoise trade.

**Thieme, Donald (Valdosta State University), Joseph Schuldenrein (Geoarcheology Research Associates), Michael Aivulasit (Geoarcheology Research Associates) and Suanna Selby Crowley (Massachusetts Archaeological Society)**

[175] *Cultural and Natural Site Formation Processes in Stratified Alluvium of the Susquehanna River, southern New York*

A multi-year investigation of five archaeological sites will be summarized in terms of how initial interpretations have been either expanded upon or revised in light of subsequent results. The sites are all housed in stratified alluvium of the Susquehanna River, a landscape strongly shaped by the retreat of the Laurentide ice sheet. A framework of three allostratigraphic units was developed after test excavations were completed during staged investigations which began in 1999. Artifacts recovered from pit features and occupation floors indicate that prehistoric occupations span the time range from the Late Archaic to Late Woodland. Final analyses and interpretations are in process and will be based upon data from particle size analysis, geochemistry, and micromorphology.

**Thiemeyer, Heinrich [138] see Dambeck, Rainer**

**Thomas, Ben [57] Discussant**

**Thomas, Colin (Yale) and Timothy McAndrews (University of Wisconsin LaCrosse)**

[45] *Local Copper Production During the Middle Horizon at the Pirque Alto Site, Cochabamba, Bolivia*

Recent research has uncovered two features consisting of standing stone rings at the multicomponent agricultural site of Pirque Alto near Cochabamba, Bolivia. These features contained slag resulting from copper smelting at high temperature, the analysis of which by means of electron microprobe indicates that they served as the bases of huayrachinas or domestic refining furnaces. We utilize information from past research on the site of Pirque Alto as well as ethnographic accounts of huayrachina use to imply a Middle Horizon date for the features. Finally, we discuss the inter-regional economic implications of Pirque Alto residents engaging in local copper production.

**Thomas, Cynthia (New South Associates, Inc), Cynthia G. Thomas (New South Associates, Inc.) and Stacey Young (New South Associates, Inc.)**

[90] *Archaeological Research of the Picayune Strand Restoration Project, Collier County, Florida*

As part of the Everglades Restoration Project, in 2005 and 2006, New South Associates, Inc. performed Phase I and Phase II Archaeological Survey and Testing in Picayune Strand State Forest, Collier County, Florida. As a result of the survey investigations of 2,521 acres, identified as high probability, 32 newly identified sites were recorded, and test excavations were conducted at 23 of those sites. In addition, test excavations were performed at 21 previously recorded sites. In 2007, New South Associates returned to Picayune Strand and recorded elevations at 43 previously recorded sites to determine if the restoration will inundate these sites.

**Thomas, Cynthia G. [90] see Thomas, Cynthia G.**

**Thomas, David (American Museum of Nat History)**

[46] *A Perspective on Still Digging: Our Fourth Decade of Archaeology on St. Catherines Island*

The American Museum of Natural History has been conducting archaeological investigations on St. Catherines Island for four decades and the digging continues. Current research objectives emphasize community patterning, subsistence and technology at the temporal extremes of the earliest (Late Archaic) and the latest (late prehistoric and mission periods) aboriginal occupations

on the island. These papers summarize some of the on-going research objectives and frame the research design for present and future fieldwork.

[171] *Discussant* [46] *Second Organizer*

**Thomas, David Hurst [46]** *see Schoeninger, Margaret J.*

**Thomas, Edith (Gila River Indian Community) [105]** *Discussant*

**Thomas, Elaine [173]** *see Bendremer, Jeffrey C.*

**Thomas, Jonathan (University of Iowa) and Grant McCall (Tulane University)**

[70] *Experimental Replication and Scanning Electron Microscopy of a Possibly Worked Middle Stone Age Hematite Bead from the Central Namib Gravel Plains, Western Namibia*

This paper presents an analysis of a possibly worked hematite bead from the central Namib gravel plains south of the Swakop drainage in the Namib-Naukluft National Park, Western Namibia. The paper describes a program of experimental replicative studies combined with scanning electron microscopy to address whether the piece was worked. The results of this study show that (1) the piece was heated in a relatively hot fire, (2) the piece has a high iron content consistent with either a highly ferric ocher or low-grade hematite, and (3) the piece was worked into a triangle through processes of pecking and grinding.

**Thomas, Jonathan [184]** *see McCall, Grant S.*

**Thomas, Kenneth D. [85]** *see Mannino, Marcello A.*

**Thomas, Noah (University of Arizona)**

[13] *Mineral Wealth and Value: Tracing the Impact of Early Spanish Colonial Mining on Puebloan Pigment and Paint Production.*

From the entradas of the late sixteenth century to the Pueblo Revolt of 1680, Spanish prospectors exploited mineral resources by accessing Pueblo landscape knowledge, labor and practice. The use of ore minerals formed an important nexus of practice between divergent concepts of wealth and value held within both Spanish colonial and Puebloan economies of the protohistoric and early colonial period. This paper explores the possible impacts of colonial mineral appropriations on Pueblo pigment production by tracing the effects of new forms of labor appropriation, workshop contexts of production, and competing notions of landscape resource potential established in the seventeenth century.

**Thomas, Sunshine (Texas A&M University)**

[53] *An examination of ceramic and glassware use as an indicator of farm modernization in the historic south*

Basic assemblage analysis at small farm sites across the American South indicate a correlation between a decline in utilitarian ceramics and an increase in glassware during the first half of the twentieth century. This observation has previously been cited as one indicator of increasingly modernized farms in the region. Archaeologists need to thoroughly examine potential material correlates of the social and technological changes experienced by farmers in the South during this period. This presentation more closely examines the idea that this particular change in artifact material type is a valid indicator of modernizing farm practices.

**Thompson, Claire (University of Alabama) and John Blitz (University of Alabama)**

[42] *Craft Production in Residential Areas at Moundville*

Household craft production plays a key role in modeling the degree of economic control at Moundville. If production was household or corporately centered, then both utilitarian and non-utilitarian artifact classes should have a dispersed distribution across the site. If artifact production was organized at the polity level by elites, then artifact classes associated with elites should have a restricted distribution in specific areas where elite-controlled production occurred. To understand the way that craft production was negotiated at Moundville, this study examines data from off-mound residential areas excavated as part of four seasons of the Early Moundville Archaeological Project (EMAP).

**Thompson, Jennifer [53]** *see Mauldin, Raymond P.*

**Thompson, Kerry (University of Arizona)**

[18] *Alk'idaq̄ 'da hooghanée (They used to live here): An archaeological study of 19th century Navajo households*

Using information from 400 sites in the four corners region of the U.S. Southwest, I incorporate Diné perspectives into the identification, and more robust understanding of the nature of 19th century Navajo and Euro-American contact. These sites present the opportunity to examine the ways in which Navajo households incorporated specific Western institutions and artifacts into an already rich heritage to meet the demands of fluctuating colonial policy and economy. Further, these data provide insight into archaeological manifestations of a culture contact situation, which took different forms in different areas, but originated with the federal Indian policies of the time.

**Thompson, M. Scott (Arizona State University)**

[61] *Mortuary Ritual and Social Memories of the Dead in Viking-Age Europe and the Prehistoric American Southwest*

Mortuary rituals are performances that, in many cases, construct social memories of the dead. This paper presents a controlled comparison of Viking-Age ship burials in Northern Europe with several elaborate burials in the American Southwest to examine how the living constructed memories of the deceased. In addition, it considers how differences in these performances may have created different kinds of memories, which shaped interactions between the living and the dead.

**Thompson, Marc (El Paso Museum of Arch.)**

[32] *Evening Star, Morning Star: Venus Imagery and Depictions of Duality in Casas Grandes Culture*

Venus iconography is common in Mesoamerican and Southwestern cultures. These include Maya, Toltec, and Mexica in the former, and Hohokam, Mimbres, and Salado in the latter. Although Venus glyphs are depicted in various media such as murals, ceramics and carved or pecked stone, they tend to be two dimensional renderings of cruciforms or pointed stars. In Casas Grandes culture, the cruciform icon assumes more plastic expressions such as flaked stone, ceramic and stone vessels, as well as architectural features including a cross-shaped room and the Mound of the Cross at Paquime. All suggest appreciation and representation of ethnically diverse, but shared concepts of duality.

**Thompson, Victor (U of West Florida), Chester DePratter (South Carolina Institute of Archaeology and Anthropology) and John Turck (University of Georgia)**

[94] *The Historical Ecology of Islands Large and Small Along the Georgia Coast*

Two key themes dominate historical ecology studies in archaeology. The first is that humans actively enact changes to the environment to suit their own needs. The second is that humans, as a keystone species, leave a considerable imprint on the environment in which they live. We evaluate these two postulates for the Georgia coast where Native Americans exploited most of these islands in this area over the past 4000 years. We explore the degree of environmental modification that these groups had on small and large islands and to what degree these modifications were the product of intentional actions and/or unintended products.

[94] *First Chair*

**Thomson, Steven [130]** *see Webb, Emily C.*

**Thorgaard, Gary [118]** *see Jordan, Leah G.*

**Thornton, Christopher P. [39]** *see Cable, Charlotte M.*

**Thornton, Erin (University of Florida)**

[182] *Zooarchaeological and Isotopic Perspectives on Ancient Maya Economy and Exchange*

Despite the importance of animal resources as both subsistence and prestige goods in ancient Maya society, their incorporation into the overall Maya economy is not yet fully understood. This paper therefore explores aspects of animal resource acquisition and trade to better understand how animal commodities were integrated into local, regional and long-distance economic spheres. Zooarchaeological data from two sites interpreted as inland trade ports (Trinidad de Nosotros and Cancuen) will be presented, along with faunal data from their associated trading partners. Strontium isotope analysis results will also be presented as a complementary method of identifying local versus non-local animal remains.

[83] *see Repussard, Antoine; [83] see Emery, Kitty F.*

Threedy, Debora (Quinney College of Law) [159] *Discussant*

**Thrower, Robert**

[171] *Southeastern American Indian Perspectives on 16th Century Spanish Entradas*

The Spanish Entradas of the 16th century had disastrous long and short term consequences for the native populations impacted by these early expeditions. Leaders of the expeditions who encountered the Indians of the Southeastern United States possessed certain advantages which resulted in increased adversity to the native populations residing within these areas. This paper examines the interpretations of the early Spanish Entrada expeditions by modern Southeastern Indian tribes and provides a synthesis of the perspectives of Southeastern Indians regarding these earliest Native-European contacts.

[173] *see Harris, Doug*

**Tulman, David (George Washington University)**

[125] *Vertical and Horizontal Distribution of Artifacts at the Wakulla Lodge Site*

Debitage and stone tool distributions over 32 m<sup>2</sup> in the 2008 excavations at the Wakulla Lodge Site show loci of use and general vertical integrity. Some downward migration of small artifacts is possible, but the larger, diagnostic tools do not appear to have moved much, if at all, since their initial deposition. In contrast, the location and density of smaller pieces of debitage indicate some downward migration.

[125] *First Chair*

**Thurston, Tina (SUNY Buffalo)**

[143] *Is small beautiful? Microhistory, microarchaeology, and the study of everyday life*

Archaeology is contingent upon connecting small pieces of evidence, from small episodes of activity, to larger questions about social change. 'Microarchaeology' has been used to describe studies of both microscopic material culture and small-scale human practices. The second meaning derives from 'microhistory', standing in contrast to the *longue durée* – small events and processes that structure human experience: ordinary activities or obscure singularities not intuitively linked to dramatic shifts. This paper traces the different origins of these concepts and the methods and theories through which they are applied, arguing that both provide perspectives larger than their size or scope imply.

**Tiedens, Shari (Statistical Research Inc.) and Scott Plumlee (Statistical Research Inc)**

[18] *Social Display and Economic Stratification: Keeping up with the Joneses at JCC*

Investigated here are artifactual results of economic stratification between turn-of-the-twentieth-century households in Tucson, Arizona. The investigation focused on evidence of social display—such as personal adornment or early adoption of new technologies—in artifact collections recovered from privies associated with several residences in one neighborhood. An attempt was made to divide the types of display encountered into categories based on investment of time, labor, and expense, to determine whether such categories might demonstrate economic distribution between neighboring homes. The results are compared to an independently developed archival model, which ranks the relevant households by economic status.

Tiedens, Shari [43] *see Plumlee, R. Scott*; [43] *see Lincoln-Babb, Lorrie*

**Tiesler, Vera (Universidad Autónoma De Yucatán) and Mónica Rodríguez-Pérez (Facultad de Ciencias Antropológicas, Universidad Autónoma de Yucatán)**

[192] *"Olmec" Head Shapes Among the Preclassic Maya and Cultural Identity.*

The excavations in the Middle Preclassic period site of Caucel, Yucatan, have led to the recent discovery of two culturally shaped skulls, which emulate the head morphology of Olmec figurines. This presentation analyzes the biographical and associated archaeological information of the findings. Evidence of the artificial head shapes, which were determined as pseudocircular tabular erect in both cases, is rare and limited to the Preclassic Period so far. Here we compare the specimens from Caucel with other seven documented skulls shaped in this fashion and discuss them in terms of the relevance of this practice as indicator of early cultural identity among the ancient Maya.

**Till, Jonathan (Crow Canyon Arch. Center)**

[164] *The Landscape and Cosmology of the Bluff Great House: The Sculpting of an Ancient Pueblo Community*

Focusing on natural and cultural landscape features associated with a great house site in the Mesa Verde region, this presentation examines the interplay of agency and landscape in the

formation of social identity and community. Using archaeological and ethnographic data, I argue that members of the Bluff Great House community established and maintained their society, through the manipulation of history, geography, and mythology, across the span of the so-called Chaco and post-Chaco eras in the 11th, 12th, and 13th centuries.

**Till, Jonathan [18]** *see Barker, Andrew L.*

**Timperley, Cinda (Gault School of Archaeological Research)**

[89] *Time/Space Patterns of Clovis-age Faunal Remains at the Gault Site, Bell County, Texas*  
Faunal remains from multiple Clovis-age excavation blocks vary by condition, quantity, and taphonomic signature. Poor preservation limits the interpretive value of the assemblage, yet there survive spatial and temporal trends among faunal attributes indicating a variety of human treatments.

**Todd, Brenda (University of Colorado)**

[88] *Chaco, Cahokia, and Chumash: A Comparative Analysis*  
At approximately 1000 A.D., the prehistoric societies of Chaco Canyon in New Mexico, Cahokia in Illinois, and the Chumash of California underwent periods of unprecedented change. This change was characterized by increasingly complex social organization, population growth and aggregation, and monumental architecture at Chaco Canyon and Cahokia. The three societies have repeatedly defied archaeological attempts at categorization into societal stages (i.e. band, tribe, chiefdom, state). This poster takes a different approach to understanding these changes by comparing and contrasting the nature of the dramatic social change observed at Chaco, Cahokia, and Chumash at the turn of the first millennium.

**Toll, H (Museum of New Mexico OAS) and C. Dean Wilson (Museum of New Mexico Office of Archaeological Studies)**

[144] *Eden Itself (?): Pueblo Occupation of the La Plata Valley*  
Occupation of the La Plata River drainage spans Basketmaker II through Pueblo III, as well as Navajo. There were fluctuations in population size in different parts of the valley. Settlements were often large, and, in especially favorable sections, long-lived. During most periods the material culture reflects strong connections to the Mesa Verde region; other temporal occupations suggest connection to the Gobernador area. Of interest is the presence of a substantial Basketmaker III community, apparently unusual in the focal area of this symposium. Agriculturally favorable conditions in the valley clearly led to its heavy use for over a millennium.

**Tolmie, Clare (University of Iowa)**

[70] *Faunal remains from Abri Cellier, France*  
Faunal analysis of material dating to the Early Upper Palaeolithic from Abri Cellier, Dordogne, France forms the basis for this study. Abri Cellier contains both worked and unworked bone and antler. This paper will present an analysis of the unworked bone assemblage and situate the results within larger questions regarding Early Upper Palaeolithic subsistence practices and procurement of faunal material for tool production.  
[70] *First Chair*

**Tomasic, John (Vanderbilt University) and Andrew Wyatt**

[36] *Examining Late Preclassic and Classic Period Power and Wealth: Research at K'o, Peten Guatemala*  
K'o is one of several medium-sized ceremonial centers surrounding the Classic Maya city of Holmul, Guatemala. Recent research demonstrates that K'o was occupied from the Late Middle Preclassic through the Terminal Classic periods (600BC-AD850). Ongoing research at K'o explores the long-term relationship between political power and economic wealth from the Late Preclassic through the Terminal Classic period through a distributional study of wealth indicators in household contexts. In this paper, we present the results of 2007 and 2008 household excavations throughout the site, as well as the results of the analysis of paleoethnobotanical remains from two Late Preclassic tombs.

**Toney, Elizabeth (University of Oklahoma) and Matthew Taliaferro (University of Texas at Austin)**

[18] *Small Site Analysis in the Mimbres Area of Southwestern New Mexico*  
The ubiquitous small one to four-room structures commonly interpreted as field houses within the archaeological literature have received considerably less attention than their less numerous larger counterparts within much of the greater southwest. Here, we use geographic information



system (GIS) technology to investigate how small sites are dispersed within the built environment of the Mimbres Valley of southwestern New Mexico. Through applying various GIS models and techniques, we conclude that most of these small sites represent logistical locales from which differing resources were exploited from the landscape.

**Toney, Elizabeth [94]** see *Gilman, Patricia A.*

**Toney, Joshua (University of Florida)**

[71] *A Complex Shift: Pottery production in the Upper Xingu, Mato Grosso, Brazil, ca. A.D. 900-1400*

Analysis of ceramic remains from two prehistoric villages in the Upper Xingu, Southern Amazon, Brazil, suggest that an overall trend of standardization took place during the period between ca. A.D. 900-1400. Evidence from these sites suggests a decrease in the variety of vessel forms produced and their degree of decoration. The remaining vessel forms show a noted degree of standardization in technology and form with minor exceptions that may suggest household level production. These changes are discussed in the context of contemporaneous local developments including the expansion of Xinguano society.

[99] see *Gillespie, Susan D.*

**Tonoike, Yukiko (Yale University)**

[110] *Beyond Style: Petrographic analysis of Dalma ceramics in two regions of Iran*

Although ceramics as chronological markers have been emphasized in studies of early complex societies, they also define cultural and interaction spheres. This paper presents the results of petrographic analysis of early fifth-millennium Dalma ceramics, found in abundance in northwestern and central Zagros. Petrographic analysis, especially microstructural analysis, is crucial, since the ceramics have previously been described as being impossible to distinguish in spite of the great distance between the regions. Preliminary analysis had shown that Dalma ceramics from northwestern Iran are, in general, homogeneous. This paper presents the results of further analysis, comparing the northwestern and central Zagros Dalma assemblages.

**Topic, John (Trent University) [60]** *Discussant*

**Topping, Peter (English Heritage)**

[91] *The Neolithic flint extraction sites of the UK.*

Neolithic flint extraction sites in the UK are located upon the chalk of southern England, and secondary gravel deposits in eastern Scotland. Technologically they represent outcrop, pit and galleried shaft exploitation. Some appear to be the earliest monuments in the landscape. To date no mining settlements have been found, suggesting seasonality. Onsite reduction varies, and extensive exchange networks appear to have distributed 'special' artefacts widely.

[91] *First Chair*

**Torrence, Corbett McP. [56]** see *Schober, Theresa M.*

**Torres, Josh (University of Florida/SouthArc, Inc.)**

[172] *The Tibes Archaeological Survey Project: Recent Research and New Directions in Socio-Political Complexity of Post-Saladoid South-Central Puerto Rico*

This paper highlights findings resultant from recent archaeological survey surrounding the Ceremonial Center of Tibes on the south-central coast of Puerto Rico. Data recovered from this survey, in conjunction with archaeological data from other sites in the area, presents a more dynamic picture of ceramic age socio-political development and organization than previously conceptualized. Through a presentation of this data, the author discusses new perspectives and directions for research related to post-Saladoid (ca. 500 and 1500 AD) settlement patterns, community organization and socio-political development in the region.

[172] *Second Organizer [172] First Chair*

**Torres-Rouff, Christina (The Colorado College) and Kelly Knudson (Arizona State University)**

[81] *Middle Horizon Social Identities in San Pedro de Atacama, Chile: Combining Recent Bioarchaeological and Biogeochemical Research*

Social identities in the San Pedro de Atacama oasis region were complex and multi-faceted during the Middle Horizon (c. AD 500-1100). Although affiliated with the Tiwanaku polity of the Lake Titicaca Basin, individuals buried in the oasis cemeteries exhibited different social identities based on a variety of factors. Here, we present new data on cranial modification styles, mortuary

behavior, and residential mobility and paleodiet based on enamel and bone isotope data to explore Middle Horizon social identities on Tiwanaku's periphery. These data reveal a population reflecting some influence from Tiwanaku together with local differences between kin groups.

**Torvinen, Andrea (Arizona State University)**

[99] *An Analysis of Travel Costs among Proposed Trading Partners in Northern Mexico*  
La Quemada, Zacatecas, was part of a regional network of centers known to have interacted through ceramic exchange during the Epiclassic period (A.D. 600-900). This study utilizes a least-cost path analysis to evaluate the geographical accessibility of neighboring centers to La Quemada. Considering travel costs alone, it was expected that the proposed trading partner of La Quemada, El Teul, would also be the most geographically accessible; however, this was not the case. This paper discusses the methods and results of the analysis and suggests the possibility that conflict between neighboring centers was responsible for the discrepancy with the archaeological record.

**Tourtellotte, Perry and Claudia Chang (Sweet Briar)**

[63] *Power at the Margins: Iron Age Landscapes of the Talgar Fan in Southeastern Kazakhstan*  
The distribution of Iron Age burial kurgans and settlements during the first millennium BC across the Talgar alluvial fan in Southeastern Kazakhstan, north of the Zailiisky Alatau Range represents a symbolic and political landscape marking the local control of fertile land along ancient streambeds. Paleo-ethnobotanical and zooarchaeological data from three excavated Iron Age settlements prove the existence of a mixed farming and herding economy at villages and hamlets. We posit a model by which agro-pastoralism rather than mobile pastoral nomadism was the primary factor in the social evolution of complexity at the margins of the Eurasian steppe.

**Tovar, Armando [53] see Taylor, Marybeth**

**Townsend, Richard (Art Institute of Chicago)**

[67] *Aztec Ritual Caves*  
Mesoamerican cave imagery became a subject of investigation in 1972 when Doris Heyden speculated about the long cave beneath the Pyramid of the Sun at Teotihuacan. The inquiry developed at a system of Aztec sites and continued in the Maya field and other major cultural areas of Amerindian antiquity. This paper reviews the fundamental Aztec information, noting key archaeological sites and ethnohistoric sources describing cave temples a places for rites of passage and as components in a network of symbolic settings linking society and city to the natural landscape and the deified forces of nature upon which life depended.

**Townsend, Russell [55] see Moore, Palmyra A.**

**Toyne, Jennifer Marla (The University of Western Ontario)**

[4] *The violence that ended it all: Bioarchaeological analysis of interpersonal trauma at the site of Kuelap, Chachapoyas, Peru*

Recent discoveries at Kuelap shed light on a violent event occurring during the early colonial period. Human skeletal remains were discovered on the floors of five circular house structures at the south end of the site, crushed beneath rocks from the dismantled walls. Osteological analysis revealed that 90% of the individuals exhibited evidence of perimortem blunt-force cranial trauma. In many cases, injuries demonstrated fractures consistent with star-shaped maces, the prehispanic weapons used by both Chachapoya and Inka warriors. This is first evidence that demonstrates intra-regional indigenous conflict may have also contributed to depopulation of the Andes during early historical times.

[4] *First Chair*

**Trampier, Joshua (University of Chicago)**

[174] *Ancient Landscape, New Methods: Remote Sensing-Guided Geoarchaeological Survey in the Western Nile Delta*

Archaeological exploration in the Nile Delta has been confined to relatively few expeditions from recent decades. This circumstance relates to research priorities and how site-centered research is "mapped" within cognitive and legal frameworks. Recent research by the Durham University mission to Sais has integrated GIS-guided analyses of remote sensing imagery, historical maps, ceramics, and geomorphological data to elicit a history of settlement in the western Delta during the mid-late Pharaonic to late antique periods (1250 B.C.E. – 600 C.E.). An exciting early result is a heretofore unmapped branch of the Nile that was a distributary of the Canopic.

Trask, Willa [43] *see* Lincoln-Babb, Lorrie

**Traslaviña Arias, Teddy**

[97] *El sentido del orden: implicancias de la transformación del espacio durante la colonia temprana en Malata, Valle del Colca, Perú*

Esta ponencia investiga la construcción del trazo urbano en una doctrina cristiana temprana. A través del uso y manejo del espacio (u orden) en sus distintos niveles o dimensiones, creemos, se expresa aquel discurso organizativo que subyace a lo material (o sentido). De este modo este estudio explora, mediante un análisis de distribución espacial, las relaciones entre los elementos propios del espacio construido con el objetivo de percibir aquel discurso en el caso específico del sitio de Malata para conocer esos cambios y/o continuidades reflejados en las transformaciones sucedidas en este asentamiento durante la época colonial temprana.

**Tratebas, Alice (Bureau of Land Management)**

[84] *Rock Art Traditions that Define Cultural Entities*

Rock art sometimes defines cultural entities more definitively than other archaeological data. Differences in ancient rock art traditions may reflect temporal or geographic separation. Dating evidence suggests that a sequence of rock art traditions on the northern Plains was created by new cultural groups moving into the area. The most ancient rock art was replaced by a different tradition that lasted thousands of years. Finally the second tradition ended, replaced by totally different rock art. Interpreting this third shift as a population change is supported by simultaneous changes in lithic assemblages, which have been overlooked by non-rock art researchers.

Travis, Scott [186] *Discussant*

**Traxler, Loa (Penn Museum)**

[149] *The Not-So-Ancient Maya Archaeologist*

The responsibilities of an archaeologist extend beyond the excavation trench, and involvement of archaeologists in public service, education, and community development reflect increasing attention to these facets of professional life. Robert Sharer's career in Maya archaeology encompasses not only important contributions in field research but also steadfast commitment to the goals of archaeology—to better understand the past and preserve its legacies for the future. His active support for public programs, service in foundations and educational institutions, and commitment to colleagues and students underscore the need for archaeologists to fully engage public education to ensure the future of our scientific endeavors.

[149] *Second Organizer* [169] *Second Organizer*

Trein, Débora [64] *see* Houk, Brett A.

**Trella, Phillip (ptrella)**

[8] *Anxiety in Town and Country: Struggles for Power and the Transformation of Systems of Food Production in Third Millennium B.C. Upper Mesopotamia*

Rather than vessels of highly functional order and efficiency, burgeoning state societies have alternately been viewed as platforms for the enactment of a range of social, political, economic and ecological stresses and anxieties. Perhaps chief among the producers of this anxiety are inter- and intra polity struggles for power between groups and individuals whose actions serve to transform established systems of food and craft production and consumption. This paper explores these linkages, through the examination of changes in systems of animal production in mid-late third millennium Upper Mesopotamia, where a highly integrated system of city-states developed and then disintegrated by 2000 B.C.

[188] *see* Holly, Lance E.

**Tremblay, Adrienne (SWCA)**

[64] *Does the popol nah really exist in Late Classic Maya lowlands?: Implications for a Late Classic political model*

Although the popol nah was an important place and political-social institution in the Colonial Yucatan Peninsula, available evidence suggests that the popol nah, or "council/mat house," may not exist in the Late Classic in the southern Maya lowlands. Recently, scholars have presented evidence that the preeminent example of the popol nah at Copan is not actually a popol nah, but a wayb'il nah, or "dreaming/sleeping house." This casts doubt on the role of the popol nah in the Late Classic and has several implications for the changes seen by archaeologists in political models at the end of the Classic period.

**Trigg, Heather (Univ Massachusetts Boston), Ashley Peles (University of Massachusetts Boston) and David Landon (University of Massachusetts Boston)**

[18] *Production and Consumption at a 19th Century Spanish New Mexican Homestead*

In 19th-century New Mexico, small and moderate sized ranches were the backbone of the Hispanic (vecino) economy. While dramatic shifts in political control from the Spanish empire, to the Mexican state, and finally the US government opened the region to new trade relations and colonizing influences of Anglo-Americans, agricultural pursuits provided subsistence goods for sustaining households and exports for the larger long-distance economy. Using floral, faunal, and material culture analyses, this research examines production and consumption at one 19th century vecino ranch. Many economic choices found at this ranch continue practices begun in the 17th century.

**Trimble, Michael (U.S. Army Corps of Engineers) [37] *Discussant***

**Tripevich, Nicholas [168] *see Contreras, Daniel A.***

**Trogdon, Michelle (University of Colorado)**

[24] *Terrace construction, soil conservation, and built landscapes in the Nochixtlan Valley, Oaxaca*

This research seeks to correlate terrace features with settlement patterns to better understand terrace variation through time and space in the Nochixtlan Valley, Oaxaca, Mexico. Terrace construction is typically a product of slope management among other factors, but the uses of terrace platforms varies from residential to agricultural. This study analyzes soils retained within buried terrace features, cross-sections of which are exposed in deeply incised river drainage walls in the Nochixtlan Valley. Soil phosphorus content will suggest the purpose of these features in antiquity, and radiocarbon dating will allow these features to be mapped with coeval settlement patterns.

**Trowbridge, Meaghan (University of Arizona)**

[18] *Ceramic Implications for Feasting in the Chacoan World: A Matter of Size*

Prehistoric feasting events are often studied on the level of individual sites or communities, but little work has been done to approach feasting on a regional scale. Chaco Canyon and its associated network of outlier sites provide an excellent opportunity to address the issues of prehistoric social interaction and organization across a network of geographically distant communities. Through studying the depositional contexts of differentially-sized, decorated bowls from sites across the greater Chacoan regional system, this poster will report findings on an investigation of the regional variation of feasting in terms of both structure and scale.

**Trunzo, Jennifer (Augusta State University), Christopher Murphy (Augusta State University) and Janet Jordan (Augusta State University)**

[163] *Archaeology at the Augusta Arsenal: Findings and Interpretations*

The main campus of Augusta State University (ASU) is located on the site of the former Augusta Arsenal. The Arsenal was a military depot associated with the Federal Government since 1819. Throughout its 129 year history, the Arsenal's function varied and it fell under Confederate control during the Civil War. Extensive renovations of ASU campus facilities began in the mid-1900s. Pursuant to federal and state regulations, an archaeological survey occurred to identify and prevent the loss of significant cultural and historical information. This report outlines these investigations to date and discusses the findings that will impact site interpretation.

**Tschauner, Hartmut (Binghamton University)**

[170] *The Sicán under the Chimú: "la vision des vaincus"?*

The occupation of Lambayeque is commonly characterized as a watershed event in Chimú expansion by scholars working in the Chimú heartland. This paper examines that occupation from a Sicán-centric perspective. Contrasting the findings of the Heyerdahl-excavations at Túcume with the evidence from my own survey of the adjacent local polity of Cinto, it seeks to understand the relationship between Sicán and Chimú elites at the two local polities' top-level central places, as well as the territorial and economic impact of the Chimú on the polities' hinterlands. Sicán-Chimú relations are best described as an uneasy, "not so indirect" Chimú rule.

**Tsouras, Theodore (National Park Service)**

[180] *Water Through the Black Sand: Evidence from New Sinagua Settlements, East of Flagstaff, Arizona*

Recently recorded in a 2,200 acre survey of privately owned land, these settlements provide new

data on agricultural and water control technologies used by the Sinagua occupying the southeastern edge of the San Francisco Volcanic Field during the 12th century A.D.

**Tsukamoto, Kenichiro**

[64] *Power and Visibility: Spatial Analysis of Lowland Maya Public Architecture at El Palmar, Campeche, Mexico.*

In the study of early complex societies, visual prominence of public architecture is crucial evidence to understand how spectacle-based power and disciplinary power were exercised and proliferated. In Classic Maya society, pyramidal temples and plazas were arenas, in which individuals were shaped and reshaped recursively through ritual activities. Based on visibility analysis using GIS at El Palmar, which is a major center located in southern Campeche, Mexico, I demonstrate how the visual prominence of public architecture was important to the process of ancient urbanization, and how the mechanisms of power were incorporated in urban spaces.

**Tuck, Patricia (Agua Caliente Band of Cahuilla Indians)**

[29] *Beyond Ha much cha vis ba; Settlement Patterns of the Coachella Valley*

This poster examines prehistoric Cahuilla settlement patterns and their distribution within the range of environmental habitats present in inland Southern California, specifically the Coachella Valley. Objectives for this study include 1) a thorough examination of the existing body of literature on the development and use of GIS analysis in archaeology, 2) an investigation of the spatial distribution of village sites, 3) testing existing theoretical subsistence strategies for prehistoric peoples in the desert region, 4) the identification of potential village site locations and 5) recommended conservation/management strategies.

[105] *Discussant*

**Tucker, Bryan (University of Florida) [59] Discussant**

**Tufano, Emiliano [85] see Mannino, Marcello A.**

**Tung, Tiffany (Vanderbilt University)**

[177] *Broken bodies: Disciplining the body and the body politic in ancient Wari society*

When states sanction violence against the body and orchestrate rituals showcasing bodily destruction and display, they create normalizing discourses about destroyed bodies and those engaged in their destruction. Although this serves to normalize violent acts, it may be that only particular forms of violence are "appropriate". Thus, only the proper violent actors may be valorized, which shapes discourses about aggression and brutality and proper bodily comportment more generally. This paper uses data on skeletal trauma and iconography to explore such constructions of violence and how they structured ways of being and the body politic in the Wari empire of the Andes.

**Turck, John [94] see Thompson, Victor D.**

**Turnbow, Christopher (Office of Contract Archeology, UNM) and Bretton Somers (Gulf South Research Corporation)**

[18] *Lakeshore Living in the Middle to Late Archaic: Evidence from Lake Cloverdale in Southwestern New Mexico*

Cloverdale was a large, late Quaternary lake located in the Boot Heel region of southwestern New Mexico. Previous geomorphic investigations suggest four major lake stands with the two most important estimated to date from 20,000 to 18,000 BP and 5,000 to 2,000 BP. Recent cultural resource survey around the ancient lakeshores discovered significant numbers of Middle Archaic and early Late Archaic components that were contemporaneous with the last significant lake stand. Assemblages are characterized by Pinto/San Jose and Gypsum projectile points, scrapers, and grinding implements. Excavations focus on human activities undertaken along the lake margins during this changing environment.

**Turnbow, Christopher [174] see Herhahn, Cynthia L.**

**Tuross, Noreen [29] see Byerly, Ryan**

**Tusa, Sebastiano [85] see Mannino, Marcello A.**

**Tveskov, Mark (Southern Oregon Univ)**

[143] *The Eye of the Storm: Small Scale Communities within Large Scale Changes on the Northwest Coast.*

Archaeologists are accustomed to interpreting community responses to social, cultural, and demographic change, sometimes at the expense of appreciating and explicating stability and persistence. Over the last 10,000 years, the Northwest Coast of North America has witnessed dynamic social and environmental change, yet in many areas, the basic facets of indigenous society remained stable and successful. This paper presents empirical data that track the persistence of communities and their social experiences and adaptations on the coast of Oregon while responding innovatively to dynamic change.

**Twaroski, Melissa [82]** *see Brookes, Samuel Owen*

**Tykot, Robert (U. of South Florida)**

[76] *Mike's Multiple Methods at MURR for Mediterranean Obsidian Sourcing*

For more than 20 years, multiple methods of chemical analysis have been done at MURR by Michael Glascock and colleagues, to identify sources of obsidian artifacts from archaeological sites around the world. This paper compares the advantages/disadvantages of different methods of elemental analysis, specifically instrumental neutron activation analysis (INAA), laser ablation ICP-mass spectrometry (LA-ICP-MS), and both lab-based and portable X-ray fluorescence spectrometry (XRF, pXRF). The data and interpretations presented are based on collaborative projects done with MURR regarding sources and trade in the central Mediterranean, and provide an example of what has been - and can be - done in other regions.

[168] *Discussant*

**Uchiyama, Junzo (Research Institute for Humanity and Nature), J. Christopher Gillam (University of South Carolina) and Peter Jordan (University of Aberdeen)**

[167] *Understanding Neolithization of East Asian Inland Seas*

The transitional process from hunter-gatherer to agrarian economy in East Asia's coastal areas did not conform to the "standard" definition of Neolithization, as defined on the basis of the western Eurasian contexts. In this paper, the concept of Neolithization will be re-examined by using the process in the East Asian Inland Seas (Japan Sea and East China Sea) as a case study. Taking several examples of landscape management in the area, it will reconsider the notion of Neolithization from the viewpoint of landscape history.

[167] *Second Organizer*

**Ullah, Isaac (ASU, School of Human Evolution and Social Change)**

[145] *Ancient Pastoralism and Landscape Change in South Central Jordan*

The Wadi Hasa Ancient Pastoralism Project (Arizona State University), in conjunction with the Mediterranean Landscape Dynamics Project, aims to better understand human interaction with the landscape east of the Jordan Rift during the Neolithic and Chalcolithic periods. To that end, field work has focused on two major aspects: reinvestigation of previously discovered sites that may be related to ancient pastoral activity, and geoarchaeological investigation of the Holocene history of Wadi al-Hasa and its tributaries. This poster presents the results of this field work in terms of the potential effects of this ancient human activity on landscape evolution in the region.

**Underhill, Anne [145]** *see Cunnar, Geoffrey E.*

**Unverzagt, Callie (Statistical Research Inc.) and Scott Plumlee (Statistical Research Inc.)**

[174] *Drinks Anyone? Using Historic Glass Containers from the Joint Courts Complex Project as Indicators of Socioeconomic Status in Tucson, Arizona*

This study explores the socioeconomic status of several households in turn-of-the-twentieth-century Tucson, Arizona, using a random sample of alcohol and medicinal glass containers collected from privy contexts. The sample was used to determine whether the consumption of different types and quantities of alcohol and medicine could be used to determine socioeconomic status. The results are compared to an independently developed model, which places the households in rankings of social and economic status based on archival evidence.

**Unverzagt, Callie [43]** *see Plumlee, R. Scott; [43]* *see Sewell, Kristin J.*

**Ur, Jason (Harvard University)**

[11] *Extensive Settlements as Precursors to the Earliest Mesopotamian Cities*

Recent research in northeastern Syria has produced new data on the developmental trajectory of

Mesopotamian urbanism. Intensive surface collection at two sites, Khirbat al-Fakhar and Tell Brak, reveal spatially extensive but discontinuous settlement that appears to have been of low density, in contrast to the nucleated morphology of the generally recognized "first cities" of the later 4th millennium BC. Furthermore, these two sites predate the Mesopotamian "Urban Revolution," best known at Uruk in southern Iraq, by a half millennium or more. These proto-urban settlements have important implications for our understanding of the social changes behind the origins of Mesopotamian cities.

[11] *First Chair*, [16] *see Hammer, Emily*

**Urban, Patricia (Kenyon College) and Edward Schortman (Kenyon College)**

[113] *Contrasting Spatial Organization in the Middle Preclassic: The Naco Valley and the Middle Chamelecon-Cacaulapa Regions*

Middle Preclassic sites located in the Naco and Middle-Chamelecon (MCC) regions of southeastern Mesoamerica date from 1250-400 BCE. Naco shows isolated large earthen structures, used and remodeled over time, without surrounding settlement, but small-scale sites in different locations. The MCC has medium-sized earthen structures surrounded by probable surface-level buildings, as well as scattered evidence - usually in the form of pottery - at smaller sites distant from those with larger mounds. Alongside the spatial differences are variations in ceramic styles, manufacturing, and distribution. These lines of evidence suggest contrasts in social organization between these two contiguous areas.

**Urban, Patricia** [149] *see Schortman, Edward*; [114] *see Schortman, Hayden N.*

**Urban, Thomas (Brown University), Kevin Smith (Brown University), and Michele Hayeur Smith (Brown University)**

[122] *Electromagnetic Surveying at an Icelandic Farmstead*

In summer of 2008 a team of researchers from Brown University conducted an investigation of the previously unexamined site, Gilsbakki, in western Iceland. The team hoped that the site, a farmstead known from the Icelandic Sagas, would contain the remnants of early turf structures. Geophysical surveying played a major role in the investigation. Specifically, multi-frequency electromagnetic induction was used to delineate a number of features at the site, provisionally interpreted as architectural remains and midden deposits. The electromagnetic survey results are shown here, along with topographic data and excavation photos to complement the geophysical interpretation of the site.

**Urban, Thomas** [122] *see Smith, Michele Hayeur*; [122] *see Smith, Kevin P.*

**Uruñuela, Gabriela (Universidad de las Americas), Cristina Desentis (Universidad de las Americas-Puebla), Manuel Vera (Universidad de las Americas-Puebla) and Patricia Plunket (Universidad de las Americas-Puebla)**

[20] *A wooden baton from Classic Cholula: Scepter? Mace handle? Ball-game club? Any other ideas?*

Prehispanic wooden objects constitute exceptional finds in the Mesoamerican archaeological record. A Classic context explored in salvage excavation on the Universidad de las Americas-Puebla campus in the Spring of 2008 produced a well-preserved 60 cm long worked stick. In this paper we provide a detailed description of this artifact and then use comparative iconographic data to discuss its possible function.

**Uruñuela, Gabriela** [20] *see Plunket, Patricia S.*

**Vadala, Jeffrey (CSU Los Angeles)**

[36] *Three Dimensional Analysis and the Recreation of a Pre-classic Ti'isil: Educational and Experiential Use of Three dimensions in Maya Archaeology*

Three dimensional modeling programs such as the Unreal Engine that are commonly used to create computer games have become advanced and flexible enough to have applications in archaeology. The Unreal Engine has been used here to recreate in three dimensions, the central region of the uniquely dense pre-classic Maya cityscape of Ti'isil. The discussion will include: the results of the spatial analysis and experiments specifically based on the three dimensional nature of this recreated virtual environment, and the possible educational benefits three dimensional site mapping can provide.

**Vail, Gabrielle (New College of Florida)**

[115] *The Role of Caves and Cenotes in Late Postclassic Maya Ritual and Worldview*  
 Archaeological and ethnohistoric research pertaining to caves and cenotes (ch'e'en) in the Maya area provide data suggesting their role as pilgrimage sites, homes to the ancestors and rain and earth deities, and locales associated with sacrificial, rain-making, and other ritual activities. This study examines a series of iconographic and textual references to caves and cenotes in Late Postclassic painted media, including codices and murals, to explore the ritual contexts of cave and cenote use and their place in the broader cosmivision of the Yucatec Maya on the eve of the Spanish Conquest.

**Valcárcel Rojas, Roberto [150]** *see Persons, A. Brooke*

**Valdez, Fred (University of Texas At Austin) and Vernon Scarborough (University of Cincinnati)**

[83] *The Prehistoric Maya of Northern Belize: Issues of Drought and Cultural Transformations*  
 The prehistoric Maya of northern Belize witnessed and adapted to various drought episodes over the course of their history. A brief review of these reported droughts are presented with a short commentary on the effects of drought in the region. A focus of this paper is the drought event of ca. AD 800 in terms of adaptations and perhaps cultural restructuring, or lack thereof, in northern Belize. Among the prehistoric sites visited for this review are Cerros, Colha, Lamanai, Chan Chich, Dos Hombres and La Milpa. Implications for neighboring and distant regions are also posited.

**Valdez, Jr., Fred [133]** *see Dodge, Robyn L.*

**Valentin, Norma [38]** *see Quezada, Osiris*

**Vallejo Caliz, Daniel**

[19] *Recycle: Postmonumental occupation at Xuenkal*  
 Given the Cehpech-Sotuta dilemma on dating the transition from the Classic to Postclassic in the Northern Lowlands, this analysis of a Late Classic structure gives an architectural alternative to dating the transition. This work will try to create a parallel to the C-shaped structures found in Uxmal and other Puuc sites. I will be focusing my attention on a modest residential structure in the site center that features columns normally associated to civic architecture. The columns are centered on an apparent later addition that will be dated by associated ceramics and a comparative analysis with the rest of the structure. This should give us an approximation of the date when the columns were set on the structure. It will also be argued that these columns were originally incorporated to this structure from a civic context and were only moved after the importance of civic structures had dissipated. Complementing this data with survey information from the site center, and published data from other Northern centers will help on further define this transition from the Classic to the Postclassic, creating a model to be tested elsewhere in the region.

**Vallieres, Claudine (McGill University), Elizabeth Arratia (Universidad Mayor de San Andres, La Paz) and Velia Mendoza (Universidad Mayor de San Andres, La Paz)**

[12] *What does zooarchaeology bring to the Tiwanaku table?*  
 This paper presents an intra-site study on the use of animal resources to delineate the urban character of Tiwanaku. Previous zooarchaeological analyses focused on comparisons between core and peripheral areas to shed light on the Tiwanaku state's political economy. Our research both builds on and departs from these earlier analyses to provide a more detailed understanding of food consumption and preparation, and its inherent social meaning, at the local level. More specifically, preliminary data on camelid, fish, and dog remains excavated in the residential neighbourhoods of Mollo Kontu will be presented and set in Tiwanaku specific urban context.

**van der Graaff, Ivo [99]** *see VanderPoppen, Robert E.*

**van der Merwe, Nikolaas (University of Cape Town)**

[70] *The Rain on the Serengeti Plain: Climatic change in Tanzania during past 1.5 million years*  
 An isotopic investigation of the diets of early hominins (*Homo habilis* and *Australopithecus boisei*) in northwest Tanzania has also produced evidence of a possible major change in the rainfall regime of this region, sometime during the past 1.5 million years. The core of this study involved measurements of the stable carbon and oxygen isotope ratios in tooth enamel of fossil hominins and associated fauna excavated at Olduvai Gorge (ca. 1.8Ma) and Peninj, Lake Natron (ca.



1.5Ma). The hominin *H. habilis* was apparently an omnivore and the ancestor of humans, while *A. boisei* was a vegetarian with an 80% diet of C<sub>4</sub> plants – probably sedges of the wetlands – who became extinct by ca. 1Ma. Among other fauna, there were some notable extinctions: the grazing elephant (*Elephas* sp.) and the grazing short-necked giraffe (*Sivatherium* sp.) were replaced by the browsing elephant and giraffe species that we know today. Most of the fossil species, however, survived into modern times unchanged or evolved into closely related forms. The carbon isotope ratios of the fossil fauna were 1.5 per mil more positive than those of their modern counterparts in the Serengeti National Park; this difference is the result of the Industrial atmosphere of modern times and can be discounted. The oxygen isotope ratios of the entire faunal community, however, became more positive by 5 per mil sometime during the past 1.5 million years. It is my hypothesis that the major oceanic source of rainfall in northwest Tanzania at 1.5Ma was the Atlantic Ocean, with the heavy <sup>18</sup>O isotope preferentially raining out of the clouds as they traveled over the Congo basin. At some point during the past 1.5 million years, the major oceanic source of rain changed to the Indian Ocean, producing the bipolar rainfall regime of today. This hypothesis is being investigated by isotopic measurements of the current rainfall in the Serengeti and of fossil fauna of different ages from Olduvai Gorge.

**Van Dyke, Ruth (Binghamton University)**

[87] *Community and Identity in Ritual Spaces and Public Places across the Ancient Southwest*  
Diverse connections, relationships, and interactions exist among peoples who share similar material culture. Public and religious architectural forms in the ancient Southwest vary widely in terms of accessibility, visibility, use, and meaning. Some are highly visible foci for public performances or community events; others are restricted meeting places for secret societies. Religious architecture is both a material embodiment of shared ideas and a place for shared experiences. In what ways do these shared ideas and experiences translate into community? I explore these relationships across time and space through the media of dance circles, great kivas, great houses, ball courts, and platform mounds.

[144] *Discussant*

**Van Keuren, Scott (University of Vermont)**

[87] *Widespread Traditions, Local Expressions – Viewing Southwestern Pottery through a Macro-Regional Lens*

Pottery is a principal signature of regional interaction and identity in the ancient Southwest. Painted ceramics in particular reveal pathways of migration and population movement, patterns of economic exchange, and expressions of cultural identity across vast landscapes. This paper surveys pan-Southwestern ceramic patterns in the four hundred years prior to European contact, and (re)considers the ways in which regional identities were shaped by stylistic emulation and population resettlement.

[18] *see Cameron, Grace E.*

**Van Nest, Julieann [53] *see Belknap, Lori***

**Van Pool, Todd (University of Missouri), Michael O'Brien (University of Missouri--Columbia) and R. Lee Lyman (University of Missouri--Columbia)**

[44] *Innovation and Natural Selection in Paleoindian Projectile Points*

Natural selection decreases variation in functional traits. Substantial changes in the selective environment can release previous selective pressures leading to stimulated variation in a new environmental context. Natural selection will then sort this variation, thereby creating new adaptations. The end of the Clovis period corresponds with shifts in the selective environment reflected in projectile points. It therefore should correspond with a period of substantial increases in the variation in point morphology followed by decreased variation around adaptive designs. We explore the manifestation of this pattern in the morphology of Paleoindian points throughout North America.

[32] *First Chair* [32] *Second Organizer*

**Van Pool, Todd [32] *see Rakita, Gordon F.M.***

**van Tol, John [99] *see VanderPoppen, Robert E.***

**Van Umm, Stan [130] *see Webb, Emily C.***

**Van West, Carla (SRI Foundation) and Thomas Windes (National Park Service, retired)**

[171] *The Role of Climate in Early Spanish-Native American Interactions in the U.S. Southwest*  
Two independent tree-ring chronologies are combined to reconstruct annual values and decadal trends in precipitation and temperature during the early Spanish Colonial period in the Middle Rio Grande area of the U.S. Southwest. These data and other corroborative datasets are used to suggest what role climate may have played in historic events of the sixteenth and seventeenth centuries A.D. Among these are the success and failures of the 1539–1542 Vazquez de Coronado Expedition, the establishment Spanish Colonial settlements in the early 1600s, and the tensions that led to the Pueblo Revolt of 1680.

**VanderPoppen, Robert (Rollins College), Ivo van der Graaff (University of Texas at Austin), John van Tol (Tauf B.V. Environmental Consultancy (NL)) and Thijs Nales (Bekker en De Graf B.V. Cultural Resource Management (NL))**

[99] *Coring Survey as a Prospection Method: A Case Study from Northern Tuscany*  
Excavations at the site of Poggio Colla carried out by the Mugello Valley Archaeological Project since 1995 have uncovered an Etruscan sanctuary and industrial zone occupied from the 8th – 2nd centuries BCE. In 2007 and 2008, the Poggio Colla Coring Project undertook a systematic coring survey of the area. The goal was to incorporate a minimally intrusive method to elucidate secondary settlement sites, especially where dense forestation prohibited traditional walking survey. This paper presents the initial survey results. Utilizing a 30mm gauge and a 100mm sand augur, the project cored an area of 35 hectares on a 25 x 20 meter grid around the settlement's acropolis. The gauge allowed an analysis of stratigraphic matrices, while the wider augur core retrieved samples of associated archaeological material. In combination with geopedological landscape analysis and geomorphological mapping using GIS software, the project yielded significant results. The size of the area preserving Etruscan anthropogenic occupation sediments indicates a larger dependent suburban zone to Poggio Colla than previously hypothesized. These results can either help to focus potential future excavation toward significant anthropogenic strata or be used in tandem with non-intrusive techniques such as ground penetrating radar and geophysical prospection. More generally, employing coring surveys to map occupation levels associated with other secondary sites in Etruria may revise notions of their extent, thereby changing how scholars view settlement patterns and landscape exploitation. Overall, coring survey can fill the methodological gap between single site and regional exploration by characterizing the area surrounding a single site.

**VanderVeen, James (IU South Bend)**

[150] *Cattle, Canines, and Cuy: The First Cuisines of the Columbian Exchange*  
The first Europeans in the Caribbean brought enough provisions to last for months. They had no knowledge of the available resources, and they desired familiar foods from home to alleviate the problems they were sure to face abroad. Yet new evidence from ceramic vessels suggests the Columbian Exchange occurred immediately as the colonists were forced to adopt the local cuisine. Their hosts, the Taínos, used imported foods themselves shortly after contact. That the traditional subsistence patterns in both cultures changed so quickly in response to new people and a new environment is an interesting tale of interaction.

**VanDerwarker, Amber (UCSB)**

[148] *Paleoethnobotany at Tres Zapotes: Spatial and Temporal Patterns in the Production and Consumption of Plant Foods*  
This paper considers temporal and spatial variation in plant remains at the site Tres Zapotes. It differs from my previous considerations of paleoethnobotany at this site in that the number of flotation samples under consideration has doubled to 200+. This doubling of the sample size allows us (1) to document temporal changes in maize production with more clarity, and (2) to test previous patterns of elite/non-elite food consumption that were based on less data, namely that non-elites supplemented their maize-based diets more heavily with tree fruits than their elite counterparts.

[148] *First Chair*

**Vandiver, Pam [130]** *see Favela, Jacob I.*

**VanDyck, Peter [56]** *see Kowalski, Jessica A.*

**Vaneckhout, Samuel [143]** *see Hulse, Eva L.*

**VanPool, Christine (University of Missouri-Columbia) and Elizabeth Newsome (University of California, San Diego)**

[112] *Spirits of Potteries*

Some pueblo potters believe pots are alive. They view making pots as mutual encounters, negotiations, and exchanges between themselves and Mother Earth's living gifts (e.g., "selfish clay"). This interaction creates "a new being" in the form of a pot, which has its own spiritual and material aspects. Because the creation of and interaction with these new agents (potteries in the vernacular) involve the spiritual/immateral and material realms, they are necessarily marked with rituals. This paper explores this interaction and the essential role that the spiritual aspect of pottery played in Southwestern mortuary contexts.

[112] *First Chair*

**VanPool, Christine [112]** see *Hays-Gilpin, Kelley A.*

**VanPool, Todd [32]** see *Slonim, Karen*

**VanValkenburgh, Nathaniel (Harvard University) and James Osborne (Harvard University)**

[113] *Home Turf: Archaeology, Territoriality, and Politics*

We provide a prolegomenon to the symposium "Territoriality in Archaeology" by first distinguishing the concept as employed in this session (a spatial strategy to affect, influence, or control resources – pace Sack) from its use in studies of animal behavior. Referencing comparative ethnographic material and research in political geography, we situate territoriality alongside related keywords – "landscape," "region," "domain," "hegemony" – and discuss problems with previous writing on the subject. We argue that territorial control is a dynamic, variable component of sovereignty in both ancient and modern polities and explore the methodological implications of this perspective.

[113] *First Chair*

**Vargo, Barbara (Geo-Marine, Inc.), Katherine Kelly (Corps of Engineers) and Laura S. Phillips (Burke Museum - University of Washington)**

[179] *A Comparative Analysis of Projectile Point Types from the Duwamish and Marymoor Sites, Puget Sound Region, Washington*

Recent studies of projectile point types in the Pacific Northwest suggest that type variability and distribution are more complex than previously thought. The comparative analysis of projectile points from the Duwamish (45K123) and Marymoor (45K19/A - 45K19/B) sites with other sites in the region suggest that although a high rate of variability in the morphological attributes of these points exists, this variability does not signify new point types, but rather, an expansion of the influence of existing styles. This paper outlines the continuing analysis of Pacific Northwest point types and raw material variation.

**Varien, Mark (Crow Canyon Archaeological Ctr) [144]** *Discussant*

**Varney, R. (Paleoresearch Institute)**

[176] *Adapting to change: Subsistence and mobility in response to climate change*

Environmental conditions were fundamentally intertwined with subsistence and mobility of prehistoric peoples. Changes in cultural stages are defined, at least in part, by broad changes in subsistence and mobility patterns. Modeled climate is used to explore the relationship between the environment and the need for cultural adaptations at the times of great cultural upheavals coincident with cultural stage transitions. Climate factors explored include water balance in spring and summer and temperature seasonality. This study focuses on the high plains and adjacent mountain regions of North America.

[176] see *Varney, R. A.*

**Vasquez, Cecilia (University of Pittsburgh)**

[130] *A Pasto household context at Chilma, Carchi (Ecuador)*

A Pasto archaeological village lies near the Chilmá River between Ecuador and Colombia. Ethnohistorically known as Mayasquer through the 16th century accounts, this Pasto-associated settlement incorporates 45 circular walled houses in the Ecuadorian side. Survey and excavations during the 2006 and 2007 field seasons provide parameters by which to infer the trajectory of this highland colony in the western piedmont of the Pasto territory during the Integration Period (1300-1400 A.D.). The current report focuses on architectural techniques, events of use and abandonment of the site, material culture variability and distribution, and boundaries between households inside the local community.

Vaughan, Andrew [192] *see Hohmann, Bobbi M.*

**Vaughn, Kevin (Purdue University) and John Kantner (School for Advanced Research)**  
[161] *Pilgrimage in Chaco and Nasca: Religiously Motivated Cooperation in Middle Range Societies*

Religiously motivated cooperation in the form of pilgrimage is a neglected element in the evolutionary dynamics of cooperation. In this paper we take a comparative approach to pilgrimage by evaluating Chaco and Nasca, two prestate middle-range societies where pilgrimage was an important component in maintaining cooperation, group cohesion, and identity. We compare materialization of ideology through ceramic iconography and production in both societies. While specific patterns are distinct in each society, we argue that pilgrimage had a significant impact in the evolution of both cooperation and leadership in Chaco and Nasca.

Vaughn, Kevin [130] *see Cross, Sarah R.*

**Vavrasek, Jessica (University of Tennessee)**

[53] *Bone tool reproduction and use: an explanation of creation methods and uses*

Through experimental reproductive methods some of the mystery behind the production and use of bone tools such as awls, projectile points, hide working tools and pottery decorating tools can be unraveled. Specific tools such as awls, projectile points and incising tools were found to be used in more than one task throughout their lifetime. Hide preparation tools were found to be sequestered on specific areas of a site and tended to favor particular animal types as sources of raw materials. A pottery decorating tool was discovered to be the creator of patterns referred to as a fingernail motif.

**Vawser, Anne (National Park Service) and Arlo McKee (University of Kansas)**

[53] *High Resolution LIDAR mapping of the Sny Magill Mound Group, Effigy Mounds National Monument, Iowa*

The Sny Magill Mound Group contains over 100 conical and effigy mounds dating to the Woodland period and numerically is the largest surviving group of prehistoric mounds in the United States. Due to the large size of the site and the density of only recently cleared vegetation, mapping efforts at the site have not provided the kind of detail necessary for in depth study of the mound group. During late 2007, high resolution LIDAR (Light Detection and Ranging) mapping of the mound group was completed with analysis of the data in 2008. The new data has provided information about mound construction and provided evidence of what are believed to be maintenance activities. The data has also been used to verify the location of several low elevation mounds that were previously undetectable. This new data has allowed us to look at the layout of the entire mound group in perspectives that had not been previously possible and may provide new insights to the mound building culture of northeast Iowa.

Vázquez Selem, Lorenzo [20] *see Borejsza, Aleksander*

**Velasco, Matthew (Vanderbilt University)**

[151] *Understanding Post-Chavin Mortuary Behavior: A Taphonomic Analysis of Human Remains from Chaván de Huántar, Peru*

Scattered post-Chaván (200-1200 AD) human remains from a drainage canal at Chaván de Huántar are examined for evidence of natural and anthropogenic modifications in order to determine if these are disturbed or secondary burials. Results show that although differences in breakage and element representation are marked between burial loci, skeletal remains (MNI=16) were intentionally deposited in the canal as secondary burials. The spatial orientation of crania also suggests that they were deliberately retained at a central locus, perhaps as a form of ancestor veneration. This study marks the first formal investigation into post-Chaván mortuary behaviors at the site.

Venables, Barney [18] *see Barker, Andrew L.*; [130] *see Wolverton, Steve*

**Venter, Marcie (University of Kentucky) and Wesley D. Stoner (University of Kentucky)**

[99] *Classic to Postclassic Changes in the Tepango Valley of Southern Veracruz, Mexico*  
New data from stratigraphic excavations and settlement survey inform Classic to Postclassic period changes in the Tepango Valley of the southwestern Tuxtla Mountains of Veracruz, Mexico. In particular, using regional demographic data, local and imperial ceramic symbols, innovations in cooking technology (comals), and proportions of different obsidian raw materials, we compare how populations at two continuously occupied Tuxteco sites, Totogal and Xoteapan, differently

responded to regional demographic shifts and external influences. While multiple catalysts contributed to the changes that characterized this period, one of the most important factors was the eastward expansion of the Aztec Empire during the Late Postclassic.

**Vento, Frank and Patty Stahlman (Clarion University of Pennsylvania)**

[46] *Genetic Stratigraphy and Paleosol Development on St. Catherines Island, Georgia: Paleoenvironmental and Archaeological Implications*

The recent identification of at least three deeply buried early Holocene and late Wisconsin age paleosols on St. Catherines Island, Georgia documents multiple episodes of barrier island stability over the last 22,000 yrs. Paleosols (allogenic genetic units) reflect prolonged episodes of landform stability and hence are excellent chronostratigraphic marker horizons which can be recognized in interbasin-intrabasin and coastal stratigraphic correlations. Further study of these paleosols and their bounding autogenic genetic facies will provide important information on paleoenvironments, climate change, eustatic sea level fluctuations and the potential for identifying deeply buried early sites on stable Georgia Bight barrier islands.

**Vento, Frank [190]** see Carr, Kurt W.; [139] see Barse, William P

**Ventresca, Alicia and Emma Radikovna Usmanova (Karaganda State University, Kazakhstan)**

[50] *Pastoral communities and 'status': Mortuary and funerary evidence from the Eurasian Bronze Age*

Community organization during the Late Bronze Age in northern Kazakhstan is difficult to comprehend due to the small number of settlements that have been identified and excavated. In contrast, there is an abundance of mortuary evidence which has been used to assess 'status' and social organization without the use of statistical techniques. Through a multivariate statistical analysis of previously published data on mortuary remains recovered from the Lisakovsk site, a picture of community lifeways and individual roles in society will emerge. Preliminary isotopic evidence will also be discussed in relation to mortuary data.

**Vera, Manuel [20]** see Urunuela, Gabriela

**Verano, John [15]** *Discussant*

**Verdun, Ester [85]** see Colonese, André Carlo

**Veth, Peter [84]** see McDonald, Josephine

**Vicari, Mary Ann (Washington University)**

[29] *Paleoarchaic Lithic Procurement Strategies in the Central Great Basin: A Spatial Approach* Paleoarchaic (11,500-7500 B.P.) hunter-gatherer mobility strategies in the central Great Basin are often interpreted as adaptive mechanisms for human survival. Lithic provenience datasets from eastern Nevada indicate early prehistoric populations engaged in large-scale residential movement to acquire subsistence resources and raw toolstone material. Preferences for specific sources of fine-grained volcanic rock suggest lithic procurement decisions warranted a consideration of geographic and geologic factors. This analysis employs spatial technologies to assess three variables: distance, terrain, and faunal catchment, in relation to lithic source preference. Results reveal that potential for social interaction, rather than energetic concerns, drove Paleoarchaic lithic procurement decisions.

**Vicent, Juan M. [91]** see Diaz-del-Rio, Pedro

**Viega Garcia, Gabriele [139]** see Silva, Rosicler T.

**Vierra, Bradley (Statistical Research Inc)**

[75] *Foraging and Farming in the Desert Borderlands*

The fact that a reliance on maize agriculture occurred much later in the area of the Jornada Mogollon, as compared to other regions of the Southwest, underscores the importance of understanding the variability in timing, context, and nature of early agriculture. The interplay between foraging and farming was presumably a fragile one, with the exact balance being determined by several factors, including population demography, resource structure, and rainfall. It is this interplay which forms the backdrop to understanding the changing role of foraging vs. farming in the Tularosa Basin of southern New Mexico.

**Villagran, Ximena (Universidade De São Paulo) and Daniela Klokler**

[85] *Building coastal landscapes: Zooarchaeology and Geoarchaeology as tools to understand ritual shell deposits*

Shellmounds in Brazilian literature are considered to have a multifunctional nature. Sacred and profane activities would have taken place in these shell sites that occur in most of the Brazilian shoreline. In the late 90's however, one site has shown unquestionable evidences of being a cemetery. Recent research in this site identified the presence of tertiary deposits leading to a better understanding of the mortuary rituals performed. In this paper we explore the contribution that zooarchaeological and geoarchaeological methods can bring to understand the depositional history of shell sites and the contribution they can offer to definition of site function.

[85] *First Chair*

**Villamil, Laura [133]** *see Sherman, Jason*

**Vogel, Melissa (Clemson University)**

[60] *Spanning the Transition: the Casma Capital City of El Purgatorio*

Recent investigations into the Casma polity reveal an emerging power that had previously been ignored in discussions of the Middle Horizon and Late Intermediate Period. Evidence from the capital city of El Purgatorio indicates that this coastal polity claimed far-reaching ties and interactions with other contemporary polities, including long-distance trade of both goods and ideas. The Casma incorporated foreign influences into their material culture while continuing to assert their own cultural identity. This paper interprets the meaning of these multiple cultural influences for Casma political organization as well as the larger political dynamics of this transitional period in Peruvian prehistory.

[60] *First Chair*

**Vokes, Arthur (Arizona State Museum) and Patrick Lyons (Arizona State Museum)**

[37] *The Role of Fee Structures in Repository Sustainability*

Sustainability is a critical problem for archaeological repositories. Curation in perpetuity is a heavy burden and it is impossible to bill enough up-front to cover long-term costs. In this paper we chart the effects of the curation crisis on the Arizona State Museum. Several years ago, a lack of space forced the Museum to stop accepting new collections while we developed alternative facilities. For the short-term, we are renting off-campus warehouse space and are again accepting archaeological material, but at a substantial increase in our costs. Given increasing expenses and decreasing state support we have implemented new fee structures.

**Volk, Michael [99]** *see Gillespie, Susan D.*

**Volta, Beniamino [154]** *see Kohut, Betsy M*

**Voorhies, Barbara [99]** *see Smith, Carley; [92]* *see Gomez, Josue A.*

**Vranich, Alexei (Cotsen Institute)**

[81] *Space and Identity*

This research combines archaeological and archival research to reconstruct of the layout of the monumental core of Tiwanaku, paying particular attention to likely routes of circulation and the location and form of points of access. The intent is to diagram the spatial relations between the attendees, points of interest within the complex, and the landscape during major ritual events. These spatial relations are the basis to propose social divisions as they would appear during a major public event. A diachronic perspective on the monumental core permits inferences on the modification of existing roles and the creation of new public identities.

**Waggoner, James**

[94] *Forest Cover and the Materiality of Hunter-Gatherer Landscapes: Implications for Late Archaic Anthropogenic Burning in the Interior Coastal Plain*

The interior Coastal Plain is often depicted as resource deficient and not suitable for settlement by large numbers of Late Archaic hunter-gatherers. This depiction stems largely from paleo-environmental reconstructions that improperly characterize the region and the portrayal of prehistoric hunter-gatherers as pursuing a harmonic existence within pristine "natural" landscapes. Commonly referred to as a fire forest, the longleaf pine-wiregrass ecosystem which covered much of the region is actually one of the most bio-diverse in the world and was adapted to frequent, low-intensity burns that ensured its overall health and longevity. Using GIS, I examine the relationship between sites and forest cover based on data from the Chickasawhatchee

Archaeological Survey in southwest Georgia.

[94] *Second Chair* [94] *Second Organizer*

**Wagner, Fritz** [170] *see Wagner, Ursel*

**Wagner, Mark**

[84] *Layers of Meaning: Mississippian Cosmology and Rock Art at the Millstone Bluff site in Southern Illinois*

Millstone Bluff is a Mississippian period (A.D. 1275-1450) village located on a mesa-like bluff with three associated rock art panels. Repeating patterns of motif elements within as well as symbolic oppositions between the three groups indicate that in combination they comprise a symbolic cross and circle design. This cosmogram expresses the belief of the Millstone Bluff villagers in the multi-directional spiritual universe of the late prehistoric and historic period Native American peoples of southeastern part of United States that was divided into Upper and Under World realms (cross) as well as the totality of that same universe (circle).

**Wagner, Ursel (Technische Universitaet M), Fritz Wagner and Izumi Shimada (Southern Illinois University)**

[170] *Archaeometric Perspective of Sicán Pyrotechnologies*

Mössbauer spectroscopy supplemented by neutron activation analysis, X-ray diffraction and thin section microscopy are being used to study ceramic finds, allowing a classification of the material and an assessment of the production techniques. The conclusions have been confirmed by laboratory and field firing experiments including the making of replica pottery. The longstanding Sicán Archaeological Project provides a unique opportunity to interpret data on newly excavated objects in the light of results from earlier campaigns. In this way, an idea of the development of firing techniques in the Sicán culture has been evolving.

**Wagner, Ursel** [170] *see Cervantes, Gabriela*

**Wahl, David (USGS) and Francisco Estrada-Belli (Boston University)**

[24] *Human-environment interactions in the Holmul Region, Peten, Guatemala from the Preclassic to Postclassic*

This paper presents the results of analyses carried out on two sediment cores from the Holmul region of eastern Peten, Guatemala. A multi-proxy approach, including pollen, magnetic susceptibility, charcoal, and loss-on-ignition analyses, has been used to reconstruct local environments during the period of prehistoric Maya settlement. This study couples archaeological evidence of settlement and land use with nearby limnological records of environmental change to test models that suggest anthropogenic and/or natural (ie, climate) impacts played a role in prehistoric settlement patterns. Such an approach provides the foundation for drawing broader conclusions about dynamic human/environment relationships in the southern Maya lowlands.

**Wailes, Bernard**

[149] *Robert Sharer and the Study of Complex Societies*

Robert Sharer was a graduate student in the Department of Anthropology at the University of Pennsylvania. After a few years elsewhere, he returned to Penn, and spent well over thirty years as a faculty member in that department and a curator in the American Section of the University of Pennsylvania Museum. His illustrious career as a Mesoamerican archaeologist and Mayanist will be reviewed elsewhere in this session by others in that same field. Here, his impact on the academic life and development of the department will be reviewed, together with his impact on the study of 'complex societies' in the wider archaeological arena.

**Wake, Thomas (Cotsen Institute of Archaeology at UCLA)**

[2] *Mortuary Archaeology at Sitio Drago, Bocas del Toro, Panama*

Sitio Drago, a 15 ha archaeological site located in the northwest shore of Isla Colon, in Caribbean Bocas del Toro province, Panama, represents a rare nucleated settlement for the region. The site includes several low surface mounds, one of which contains human burials placed in carefully prepared coral slab-lined tombs. This presentation focuses on the 4 burials recovered to date and the contexts they were recovered from. The artifact rich accumulation of faunal remains and ceramics in the 20 cm of soil that covered these tombs is discussed in terms of interpreting past human behavior at the cemetery.

[99] *see Smith, Carley*

**Walker, Jeff** [172] *Discussant*

**Walker, John (UCF)**[139] *Gardens and Cities in the Western Amazon*

Archaeologists working in the western Amazon have documented anthropogenic landscapes that include mounds and causeways, raised fields and geoglyphs. Some landscapes might usefully be called "early urban," adding to discussions of comparative urbanism that include Sub-Saharan Africa and North China. However, a "Garden City" model is flawed as an analogy for precolumbian Amazonian landscapes, as urban planning theory, and as a blueprint for future development. Jacobs' critiques of the original Garden City provide a clearer understanding of how urban landscapes work at the ground level, and may provide insight into Amazonian cases.

[139] *First Chair***Walker, William (New Mexico State University) and Michael B. Schiffer (University of Arizona)**[112] *Artifact Agency: A Communication Theory Approach*

This paper applies an artifact based theory of communication to the study of object agency. This framework construes interactions between people and things as transfers of information. People react or interact to information they glean from things resulting in behavioral variation that over time changes the life histories of objects. Archaeologists can then examine those changes to infer forms of artifact agency and how they vary in different historical contexts. To illustrate this framing of artifact agency as a communicative process we examine changing social statuses of ceramic actors during the Mimbres and Postmimbres pueblo periods of southwestern New Mexico.

Walker, William [48] *see Hokanson, Jeffrey H.***Wall, Nicole (University of Nebraska), Karl J. Reinhard (University of Nebraska) and Matthias I. Okoye (Nebraska Institute of Forensic Sciences, Inc.)**[28] *Determining Location of Homicide through Palynology*

Palynological studies were conducted in a 2003 homicide case. The pollen analysis tested multiple police working hypotheses regarding possible origin and transportation of the corpse. Pollen was processed from three different samples which included the hair, intestinal tissue, and the underlying carpet on which the deceased was found. The microscopic analysis of the palynomorphs recovered dietary pollen grains and the type of environmental pollen spectrum found at the crime scene. The dietary pollen and background pollen supported one of three police hypotheses. Further studies were planned to collect and identify the pollen spectrum at the crime scene in order to strengthen the preliminary results. However, our preliminary results were sufficient for the authorities at that time. Also, a plea bargain brought closure to the case and terminated further studies. However, recently, the pollen evidence in the case is being re-analyzed for statistical purposes which may help U.S. forensic pollen studies gain more acceptance in the forensic identification professional community and possibly the court system.

**Wallace, Antoinette (City of St. Augustine CSQ), Carl Halbirt (City of St. Augustine Archaeologist) and Kathleen Deagan (University of Florida Museum of Natural History)**[55] *Beyond the Fountain of Youth: St. Augustine, Florida prior to European Colonization*

In 2015, St. Augustine will celebrate the 450th anniversary of its founding by Pedro Menendez de Aviles. The city's history, however, is not limited to its European heritage. Prior to the Spanish Entrada, the region consisted of an extensive collection of late prehistoric Timucuan settlements primarily concentrated along the Intercoastal Waterway. Menendez established his initial encampment at a coastal Timucuan village under the domain of the cacique Seloy. Archaeological investigations around the Menendez encampment provide new information about late coastal Timucuan settlement organization and village life, and a glimpse as to what the Spanish may have witnessed in 1565.

**Wallace, Eliza (Boston University) and Bruno Frohlich (National Museum of Natural History, Smithsonian Institution)**[156] *Spatial Analysis of Khirigsuur Burial Mounds in Northern Mongolia*

The Bronze Age Burials, Megaliths, and Nomadic Demographics Project conducted a number of excavations of small and medium khirigsuurs, distinctive Bronze Age stone mounded structures, in Hovsgol Aimag, Mongolia, exposing single shallow graves beneath the stone superstructures. This evidence lies in contrast with khirigsuur excavations reported from other areas of Mongolia, which contain little to no evidence of human burial. This difference suggests a regional shift in the meaning of the structures. Spatial analysis of the grave architecture and mound placement within the Hovsgol landscape clarifies the local use and the construction process of khirigsuurs.



**Wallace, JoAnn (Arizona State University)**

[18] *Prehistoric Exchange in the South Mountain Region, Central AZ*

The goal of this study is to use existing research to link hypothesized Hohokam trails (300 BC to AD 1450) traversing the South Mountains (Phoenix, AZ) with trails and prehistoric settlements in the surrounding area. Focusing on the South Mountains allows an intensive study of its role in cultural and physical landscapes within the study area. Ethnographic and archaeological studies are used to define possible connections with prehistoric settlements in the vicinity. This study examines the potential extent and implications of prehistoric exchange networks for this location on a local and regional scale by identifying plausible connections with surrounding settlements.

**Waller, Joseph (PAL/UCONN)**

[116] *"Grown Up in that Very Place": Twelfth to Fourteenth Century A.D. Social Organization in the Territory of the Narragansett*

Ongoing archaeological study of a coastal site in Rhode Island is providing a unique opportunity to study the formation of Narragansett Indian tribal territory and society as observed in the seventeenth century. The spatial distribution of cultural features and domestic structures within and across the site has provided unprecedented categories of data from which to examine Native American social organization within the region during the centuries leading up to European Contact. Settlement and subsistence data from the site will be presented and interpreted in terms of their implications for understanding ancestral Narragansett Indian social complexity during the Late Woodland Period.

**Wallis, Neill (University of Florida)**

[142] *Swift Creek Entanglements along the Atlantic Coast*

On the Lower St. Johns River, Florida, complicated stamped vessels that were technologically identical to domestic wares were deposited in Woodland period burial mounds alongside mortuary-specific assemblages. New chemical and mineralogical data indicate that many of the complicated stamped vessels deposited at mounds were foreign-made while their village counterparts were locally made. This evidence requires new explanations for how complicated carved and stamped objects were mobilized in social relations. I discuss how the power of each unique Swift Creek motif was materialized and enacted, drawing particular focus to indelibly marked artifacts as technologies of extension and enchainment.

**Walls, Karolina**

[99] *A Study of Architectural Energetics and Symbolism in Mesoamerica and Ancient Egypt*

The study examines the relationship between energetics and symbolism of monumental architecture. In order to demonstrate the universal nature of this linkage, and its fundamental importance in the formation of the state, it compares major structures at key sites in Mesoamerica (Rio Azul, Copan and, Chichen Itza) and Egypt (Saqqara, Deir el Bahri, and Philae). The selected sites cover a wide chronological span in order to demonstrate the continuing importance of energy expenditure in solidifying and maintaining elite status over time.

**Walls, Matthew [146]** see Dawson, Peter C.

**Walsh, Megan [83]** see Kennett, Douglas J.

**Walter, Aaron (University of N Florida)**

[32] *Mi Casas es su Casas: A Re-analysis of Di Peso's Viejo Period Pithouse Data*

While considerable attention has been paid to Medio period architecture in the Casas Grandes region, very little consideration has been given to Viejo period house forms. This poster analyzes pit-house architecture during the Viejo period. Specifically, I examine the characteristics of pit-house structures at the Convento site in order to ascertain whether or not there are significant differences between the architectural styles of the Convento and the Pilon phases. Moreover, this poster briefly compares the pit-house architecture of the Casas Grandes region to other pit-houses throughout the Southwest.

[32] see Walter, Aaron T.

**Walters, Margaret [29]** see Amick, Daniel S.

**Walton, David (The College of Wooster)**

[88] *Lights, Camera, Action! The Media and Public Knowledge in New World Archaeology*

Assessing the public image of archaeology reveals the current problems the discipline faces in public communication. A questionnaire survey and focus group discussion were conducted on a

college campus in Ohio. The responses clearly demonstrate inaccurate depictions people gain through the media. Specifically, there is an imbalance in coverage on Old World compared to New World archaeology. Generally, the main problem is that archaeologists are not using the media to its full potential. Effectively integrating professional archaeologists into mass media outlets will help to restore an accurate image of archaeology in the public mind.

**Wang, Haicheng (University of Washington)**

[187] *Inscriptions from the Tomb of the King of Zhongshan*

In 1974 Chinese archaeologists recovered three lengthy inscriptions on ritual vessels from the tomb of King Cuo of the Zhongshan state, dating to c. 300 BC. I argue that even with contemporary texts and a clear archaeological context it is still difficult to gauge the real intentions, motivations, and ambitions of ancient political actors, because these texts, almost without exception, belong to the category of public transcript, to use James Scott's terminology. Nevertheless we may learn much about the dramaturgy of domination if we integrate text and archaeology to understand the social action of public display and its audience.

**Wanzenried, Michael (University of Montana) and Anna Prentiss (University of Montana)**

[118] *Hunter-Gatherers on the Canadian Plateau: the 2008 archaeological investigation of the Bridge River site.*

Housepit villages of the Middle Fraser Canyon, British Columbia, provide a locus for research and debate concerning socio-economic and political change among hunter-gatherer peoples. The 2008 field season at the Bridge River site integrated geophysical studies and archaeological excavations to reveal deeply stratified occupation floors containing hearths, cache pits and large assemblages of lithic artifacts and faunal remains. This paper presents an overview of the 2008-2009 Bridge River project and considers implications for our understanding of emergent complexity in the Interior Pacific Northwest with a particular emphasis on the period of 1600-1100 B.P.

**Ward, Christine (Statistical Research, Inc) and Phillip Leckman (Statistical Research, Inc.)**

[75] *Early Formative Period Villages in the Hueco Bolson*

The Mesilla phase (A.D. 200/400 to 1000) in the Jornada region is known primarily from the excavation of a few villages and some other, smaller residential and logistical sites. FB16985, located low on an Organ Mountains alluvial fan, appears in ways similar to other early villages such as Conejo and Turquoise Ridge. Using data obtained from recent excavations at FB16985, we compare and contrast this village with others and add to this growing database. We briefly describe the site and its constituent elements, make comparisons with other Mesilla phase villages in the region, and suggest productive directions for future research.

[75] *First Chair* [75] *Second Organizer*

**Wardlaw, Dennis (Univ. Of Central Florida), Charles Dionne (University of Central Florida) and John Schultz (University of Central Florida)**

[99] *Delineation and Resolution of Unmarked Graves Using Geophysical Methods*

The integration of multiple geophysical methods provides complimentary data in determining the location and dimensions of unmarked graves. Using two geophysical instruments, ground-penetrating radar (GPR) and a conductivity meter (EM), two sections of Greenwood Cemetery (Orlando, Florida) were surveyed. The first is a marked section which served as a control for the study; the second is an open area (50m<sup>2</sup>) containing numerous unmarked graves that was surveyed using different transect intervals and profile orientations. The processed data was compared to assess the optimal delineation and resolution of unmarked graves. Methodological implications will be discussed.

**Warnasch, Scott (NYC OCME)**

[174] *Archaeological Methodology at the World Trade Center Site*

Archaeological methodology was critical to the success of the World Trade Center Human Remains Recovery Project conducted at "Ground Zero". The main goals of the proposed poster are to present an overview of the role archaeology played in this urban mass disaster recovery and to discuss the relationship between archaeologists and forensic investigations. The poster design will illustrate the process and methods used on site to: define the scope and boundaries of the excavation, document the findings and sift the excavated material.

**Warren, Graeme [91] see Cooney, Gabriel**

**Warwick, Matthew (UW - Milwaukee)**

[16] *Shepherding the Herd from the Household Corral into the Political Arena: Formative Period Herding in the Lake Titicaca Basin*

Cooperation and surplus mobilization are key factors that underwrite change in sociopolitical organization, from small communities to multi-community polities. Pastoral economies are compatible with surplus production since: 1) animals are easily stored "on-the-hoof" and 2) careful herd management enables the productive demands of the both the domestic and political realms to be met. Faunal remains from Formative Period agro-pastoralists living in the Lake Titicaca basin serve as a case study – to help differentiate how domestic versus political agendas shaped herd animal exploitation. To this end, herd management practices were studied and context-specific differences, in processing and assemblage composition, were identified.

**Waselkov, Gregory [142] see Price, Sarah E.**

**Waterman, Anna (University of Iowa) and John Willman (The University of Iowa)**

[138] *Demographic and Health Status Patterns from the Late Neolithic Collective Burials of Bolóres (Torres Vedras), Portugal: Methodological Considerations and Results*

There is compelling archaeological evidence that during the 2nd and 3rd millennia BC in the Sizandro and Alcabrichel river valleys population density increased, social stratification emerged, and interregional interaction intensified. However, information about the biological effects of these changes is limited. This paper details the results of the analysis of human skeletal remains from the Late Neolithic collective burial of Bolóres (Torres Vedras) and compares the findings from this burial with others in the immediate vicinity. The special methodological considerations of working with commingled and fragmentary remains from collective burials are also discussed.

**Waters, Michael R. [190] see Jennings, Thomas A.; [29] see Goebel, Ted**

**Watkins, Christopher [110] see Kelly, Sophia E.**

**Watkins, Joe (University of Oklahoma)**

[69] *"Keeping it ethical: presenting and representing American Indian issues to the American television public on TimeTeam America"*

According to the A.C. Nielsen Co., the average American watches more than 4 hours of TV each day (or 28 hours/week, or 2 months of nonstop TV-watching per year). In a 65-year life, that person will have spent 9 years glued to the tube. With this impact, it becomes necessary not only that accurate material be presented, but also that inaccurate stereotypes be refuted. While not formally an "on-air spokesperson" for all American Indian cultures throughout 20 centuries of American habitation, perhaps a de facto position has evolved. In this presentation, I discuss some issues of presentation and representation.

**[137] Discussant [104] First Chair**

**Watson, Adam (University of Virginia)**

[66] *Watersheds and Big Men: Reassessing the Importance of Hydrology and Differential Agricultural Success in Chacoan Political Evolution*

The role of climate change and its impact on agricultural success figure prominently in explanatory models that account for the rise and fall of Chaco Canyon as the core of a regional phenomenon. In this study, I test one particularly influential model of Chacoan political evolution, bringing to bear empirical data derived from spatial, environmental, and archaeological parameters integrated using a GIS. The results lend support to the hypothesis that the earliest great houses were spatially associated with the richest and best-watered farmland but challenge the idea that the Chacoan ascendancy was predicated upon the production of agricultural surplus.

**Watson, Brett (University of Calgary) and Geoffrey McCafferty (University of Calgary)**

[101] *Proyecto Arqueologica Granada, Nicaragua: Season One Results*

The Proyecto Arqueologica Granada, Nicaragua continues a long-standing research focus on Post-Classic migration stories linking Central Mexico and the Greater Nicoya region of Lower Central America. Research in the summer of 2008 at the site of Tepetate on the outskirts of Granada sampled several Sapo-a-period loci. This poster presents results of architectural and mortuary remains, and serves as an introduction to themes covered in this poster session.

**Watson, Brett [101]** *see* *Watson, Brett*

**Watson, Patty**

[67] *Forty Years' Pursuit of Human Prehistory in the World Underground*

In Eastern North America, systematic archaeology in big caves with miles of dark zone began during the 1960s. Research goals, research techniques, and interpretative frameworks have changed significantly over the past 40 years. I summarize major trends characterizing archaeology underground from the mid-1960s to the mid-2000s with reference to several big caves in the mid-continental karst.

**Watters, David (Carnegie Museum of Natura)**

[106] *Jim Richardson's legacy in museum anthropology*

Richardson's archaeological research and publications about Peru and Eastern North America are well known to his colleagues. Less well known is his involvement in the field of museum anthropology, where his contributions create a separate legacy that will continue to inspire future generations of visitors to Carnegie Museum of Natural History and to make available to future researchers a diversity of collections. For four decades, he forged links among anthropologists and other scholars at academic institutions in the Pittsburgh region. How and why he was drawn to museum anthropology are central elements in understanding his anthropological career.

[106] *see* *Crock, John G.*

**Watters, Margaret (University of Birmingham) and Bryan Haley (University of Mississippi)**

[69] *Keeping Cool Under Pressure*

Geophysical surveys in archaeology are well established in terms of methodology employed to achieve a final goal, to map variations of subsurface properties across a site. As the geophysical survey team for Time Team America, work has been exciting, frustrating and in the end very rewarding. We have had to learn how to work within the filming schedule whilst maintaining the highest standard for data collection, processing and interpretation. This paper presents the unique challenges presented by working with a television program that demanded near-instant results from the geophysical surveys for excavation location and our commitment to responsible geophysical survey.

**Weaver, Brendan (Vanderbilt University) and Kathryn E. DeTore (Vanderbilt University)**

[97] *Colonial Crafts: Preliminary Investigations into Labor, Space, and Household Production of the 16th Century Community at Malata, Peru*

Beginning in the 1540s, Franciscan missionaries based in the colonial administrative city of Arequipa began entering the small agrarian communities in the Colca valley, marking the beginning of a long transition in the Collagua region from Inca to Spanish imperial, ideological, and economic influences. Archaeological inquiries from 2006 to 2008 at the site of one such community, Malata, shed light onto the effect of this spiritual and economic conquest on the production of ceramics, textiles, and metals. Our preliminary explorations examine the organization of labor, space, and production within households at Malata.

**Webb, Emily (University of Western Ontario), Christine White (University of Western Ontario), Fred Longstaffe (University of Western Ontario), Stan Van Umm (University of Western Ontario) and Steven Thomson (University of Western Ontario)**

[130] *Carbon- and nitrogen-isotope and endogenous cortisol analysis of archaeological human hair from the Nasca region (AD 1-1000)*

Segmental analysis permits access to the permanent, sequential archive of physiological, environmental and dietary information preserved in human hair. Twenty hair samples from burials excavated at several sites in the Nasca region (including Cahuachi) have been analyzed in month-by-month segments for their carbon and nitrogen isotopic compositions. These data are used to reconstruct dietary modification related to seasonal change or geographic relocations, and to evaluate physiological stress during the last months of life. Physical and/or emotional stress was assessed by measuring endogenous cortisol, and these data are used to make inferences about the degree of stress experienced by these individuals.

**Webber, Charlie**

[114] *A Comparison of Preclassic and Classic Period Communities in the El Paraiso Valley, Honduras.*

This paper presents differences in Preclassic and Classic period site distribution within the El Paraiso Valley of northwest Honduras. Late Preclassic settlement was distributed throughout the Valley with the majority of settlement clustered in three areas, two of which were located away

from the largest centers. The majority of Classic period occupation was located in the southeast quadrant of the Valley, coalescing around the two largest sites of the period. During these two episodes of peak population the Valley-wide population shifted from a dispersed lifestyle loosely tied to larger centers, to an urban lifestyle focused on the larger centers.

**Weber, Steve and Arunima Kashyap**

[39] *Does Size Matter: The Role and Significance of Cereals Grains in the Indus Civilization*  
Cereal grains play a pivotal role in the rise and character of the Indus Civilization. Archaeologists have traditionally focused their attention on the large grained crops of wheat and barley while often minimizing the importance of the smaller grained millets. Both environmental and cultural variables influence crop selection in the past as well as today. This paper explores the role and significance of cereal grain selection during the evolution of the Indus civilization.

**Webster, Aleks (Arizona State University)**

[112] *Navajo Hooghan: Family Member or Sacred Space*  
Researchers have contributed to the wealth of information about the Navajo hooghan, but what has been written about the hooghan has been accomplished through a Euro-American worldview. Rarely has architecture been discussed in terms of a tribe's religious framework or the direct relationship the people have with the built form. Utilizing Hallowell (1960), Bird-David (1999) and Morrison's (2000, 2002) existential principles of 'person', 'power' and 'gift' as foundational ontological, epistemological and axiological precepts, this paper empirically finds that the Navajo hooghan qualifies as an other-than-human person who shares blessings and a reciprocal relationship with the Diné who share his/her space.

**Webster, David (Penn State University)**

[83] *Maya Drought and Niche Inheritance*  
Many Mayanists long rejected what they saw as "environmental determinism" as a factor in the Maya collapse. Recently many have, however, embraced one form of such determinism to explain what happened to the Maya. Drought, along with many other factors, undoubtedly played a role in the culture history of the Maya Lowlands, but is most convincing for 8th century Maya if coupled with a long history of niche inheritance.

**Webster, James [83]** see Brook, George A; [83] see Moyes, Holley

**Webster, Laurie (University of Arizona)**

[87] *Attire and Identity: Clothing Diversity in the Late Prehistoric Southwest*  
Clothing is one of the most visible ways in which individuals and groups communicate their social identities. Garment styles, weaving techniques, fiber choices, color preferences, and design motifs and symmetries vary widely across social and ethnic boundaries and among people of different social status. Drawing from archaeological textile evidence and clothing depictions on ceramics, murals, and other representational media, this paper explores the macro-regional diversity of daily and ritual clothing styles across the U.S. Southwest during the period A.D. 1000-1600, then looks more closely at variability within one particular region, Ancestral Pueblo societies on the Colorado Plateau.

[66] see Jolie, Edward A.

**Weedman Arthur, Kathryn (USFSP)**

[107] *Ritual, Gender, and Politics: Material and Spatial Evidence for Female Ritual-Political Leadership in the Highlands of Southern Ethiopia*  
By combining life histories with ethnoarchaeological research, I reevaluate ethnoarchaeological studies that link women's identity in the past with Western ideals of gender stratification and tasks. Among the Gamo of southern Ethiopia, life and oral histories reveal that prior to the influx of Christianity and Socialism, Gamo women were active agents in political and religious realms. In particular, women through participation in communal rituals transformed themselves into community leaders and decision makers, Gimuwaa, with fame and respect. This paper will discuss the history and transformations in the material and spatial markers of women's identity as leaders in southern Ethiopia.

[107] *First Chair*

**Weeks, Rex (Arizona State University)**

[84] *Relations among Signs: The Identification of Midewiwin Rock Paintings*  
In the Canadian Shield, many rock painting sites, of uncertain age and cultural affiliation, have been compared with the imagery from ethnographic examples of Ojibwa Midewiwin birchbark

scrolls. Numerous symbolic similarities between the two have led some archaeologists to attribute much Shield rock-art to possible Midewiwin ceremonialism. However when considered in isolation, most of the symbols highlighted by previous research are not necessarily diagnostic of the Midewiwin. Rather, it is certain configurations of the signs, as they occur together, that appear to be unique to the Midewiwin. This study identifies plausible cases of Midewiwin rock painting sites through semiotic examination.

**Wegener, Robert [10]** see *Graves, William M.*

**Weinand, Daniel (University of Tennessee) and Scott Meeks (University of Tennessee)**  
[98] *Can Human Population Dynamics and Environmental Change Explain the Scarcity of Bison (*Bos bison*) in the American Southeast?*

This study attempts to elucidate some of the environmental and cultural constraints limiting the timing of American bison (*Bos bison*) migration into the North American Southeast. By combining previous spatial and temporal data from reported bison finds and paleoecological data from the Southeast, we propose that environmental change (coincident with the timing for the Little Ice Age) coupled with decreased human population densities associated with the perceived Vacant Quarter are responsible for the late arrival of bison to the region. Further, an increase in agriculture and hunting pressure during the 19th Century led to their rapid extirpation from the Southeast.

**Welch, Daniel (Texas A&M University)**

[147] *Ceramic-Period Resource Use and Cultural Movement in the Western Highlands of Tutuila Island, American Samoa*

Ceramic-phase occupation on Tutuila Island is thought to be restricted to the coastal margins. Recent fieldwork on the western portion of Tutuila has increased number of known ceramic-bearing sites. These new sites demonstrate that ceramic-period occupants utilized uplands and highland resources habitually. The increased number of upland and highland sites indicates that ceramic-period inhabitants utilized natural resources across a wider geographic area and also had a more diverse settlement pattern than previously known. A preliminary chronology of ceramic-period cultural movement in regards to resource availability, volcanic activity and population pressure is addressed in response to these findings.

[147] see *Welch, Daniel R.*

**Welch, Matthew [83]** see *Sever, Thomas*

**Welch, Paul (Southern Illinois University), C. Margaret Scarry (University of North Carolina) and Vincas Steponaitis (University of North Carolina)**

[42] *A Short History of Moundville Research*

We know a lot about Moundville; the record of research there begins in the 1800s. This accumulated empirical base has allowed researchers to address wide-ranging questions whose nature shifted as archaeologists shifted theoretical focus. Principal research focuses at Moundville have been: preoccupation with the Moundbuilders; the Midwest Taxonomic System, chronology, and past lifeways; processual archaeology's focus on social organization and its evolution; and the current era's melding of methods of earlier research with questions influenced by postprocessual thought. Notable in this history is a consistent view of new work as refining previous understandings rather than overthrowing them.

**Wells, E. Christian (University of South Florida) and Alejandro Figueroa (University of South Florida)**

[117] *El Antiqual, a Postclassic Hilltop Settlement on Roatan Island, Honduras*

Although archaeological research has been undertaken in the Bay Islands of Honduras for over a century, very little is known about the peoples that occupied this region before Columbus' famous encounter with a local trading canoe in 1502. The island of Roatan is especially poorly understood because of wide-scale site destruction and looting in recent years. This paper reviews the prehistory of Roatan and reports on a recent survey of El Antiqual, a Postclassic hilltop settlement on the island. The paper also describes a large collection of pottery from the site that was recovered by local residents in the 1960s.

[7] *First Moderator*

**Wells, E. Christian [175]** see *Rothenberg, Kara A.*; [114] see *Davis-Salazar, Karla L.*

**Wells, Joshua (Indiana U. South Bend) and David Hakken (Indiana University, Bloomington)**

[17] *When All You Have is a Cybertool: Querying the Archaeological Informatics Infrastructure*

The production, maintenance, and usefulness of publicly-managed archaeological databases are immediate and growing concerns for research and cultural resource management archaeologists. This paper details initial archaeological and informatics findings from an interoperability survey of state-level (SHPO and similar) archaeological databases in the Midwestern and Southeastern United States. The survey is designed to provide a comparative assessment of publicly-managed archaeological data structures within the United States in order to illuminate the potential of these individual and combined cybertools for answering anthropological questions about prehistory. An examination of records pertinent to the Mississippian tradition is made as a test case.

**Wells, Peter (University of Minnesota) [61] *Discussant***

**Welner, Michael [28] *see Reinhard, Karl***

**Wendrich, Willeke (UCLA)**

[162] *Post-Colonial Archaeology In Egypt: Adjusting To Political And Environmental Climates*

The Egyptian government requires that archaeological teams consist of well trained specialists, which precludes the training of students in the field. The only official field schools taught in Egypt were organized to train employees of the Supreme Council of Antiquities (SCA). In 2008 for the first time permission was given for a joint field school in which ten undergraduate students and ten inspectors of the SCA were working together. For the students this has resulted in an unforgettable cultural experience, for a large part because of the close interaction with an American or Egyptian counterpart.

**Wendt, Carl (Cal State University - Fullerton) and Roberto Lunagómez Reyes (Museo de Antropología de Xalapa-MAX, Universidad Veracruzana)**

[73] *Investigating the Arroyo Pesquero Olmec*

Since the 1969 discovery of hundreds of Olmec masks, celts, and other greenstone objects in the bottom of the Pesquero stream in southern Veracruz, the Arroyo Pesquero site has been of great interest to scholars of Olmec art, ideology, and archaeology. After more than 35 years since the discovery, not a single archaeological excavation or systematic site survey has been initiated in the region. A recent sub-surface testing program and reconnaissance survey is described. Results of the investigation reveal that recent human impacts, river migration, and new course formation have significantly compromised the site's integrity.

**Wernecke, D. Clark (The Gault School of Archaeological Research)**

[89] *A New Commitment to Archaeological Research and Education*

Stemming from the work begun at the Gault Clovis Site in Central Texas, the GSAR was formed to continue that specific research as well as to look at a larger picture. The non-profit school is a center for interdisciplinary research archaeology focusing on the earliest peoples in the western hemisphere and their cultural antecedents. This work is expected to generate new data and new insights into old data. Central to the GSAR's mission is the education of students in archaeology and related professions, the general public, and fostering the growth of innovative young researchers in our field.

[89] *First Chair*

**Werness, Maline (Millsaps College; UTA)**

[6] *Redefining the Chocholá Style*

Both early and more recent publications place Chocholá ceramics among the most significant Maya artistic achievements. First recognized in publications by John Lloyd Stephens and Herbert Spinden, such vessels were identified as a cohesive style in Michael Coe's influential 1973 work. Subsequently, several attempts have been made to further define the style, but each definition either omits important subdivisions or develops a needlessly broad approach. Based on an expanded Chocholá corpus, I will reexamine these ceramics in order to refine and correct the stylistic definition. This investigation will lead to larger suggestions regarding socio-political and artistic interaction across sites.

**Wernke, Steven (Vanderbilt University) and Ericka Guerra Santander (Universidad Nacional San Agustín, Peru)**

[97] *The Re-Construction of Community at Malata, a Provincial Inka Outpost and Early Mission Settlement in Highland Peru*

Results from three seasons of excavations at the site of Malata in highland Peru provide insights into change and continuity in domestic and ritual practices under successive waves of prehispanic and Spanish colonialism. This presentation provides an overview of these findings, from changes in the built environment, as Malata was transformed from a provincial Inka outpost into a mission shortly after the conquest, to trans-conquest changes in the organization of domestic practices, exchange, and markers of community identity. Our preliminary analyses explore how materiality was a key channel of negotiation in these successive colonial encounters.

[97] *First Chair*; [97] *see Morales, Saul C*

**Wescott, Kim (Georgia State University)**

[142] *Riverfront Village and the Practice of Storage: A Subterranean Feature Analysis*

Due to how little attention has been paid to village sites in the past, less is known about how individuals performed daily activities and constructed their social environment. The identification and analysis of above ground and subterranean storage facilities has also been limited (Anderson et al 1995:281). In this paper argue that studies on subterranean storage are necessary for understanding how individuals interacted within large-scale and small-scale sociopolitical structures. Subterranean storage is an effective means of removing surplus from public ownership and reserving it for private consumption (DeBoer 1988). How did peripheral Mississippian communities exercise their own creative control to support sociopolitical structure or employ efforts to resist it? This study is an attempt to fill the "fuzzy space" in Southeastern Mississippian archaeological literature.

[142] *First Chair*

**Wesler, Kit (Murray State University)**

[82] *Mississippian West Kentucky: Retrospective And Prospective*

In 1983, Barry Lewis initiated the Western Kentucky Project to survey and test later prehistoric sites along the Mississippi and Ohio Rivers at the western end of Kentucky. Murray State University accepted the Wickliffe Mounds site, and began excavations. The two projects complemented each other in focus and scope. The Western Kentucky Project contributed data regarding the big mound sites, as well as some smaller sites, providing a regional context for Mississippian developments. This paper reviews West Kentucky Mississippian in light of the work of the 1980s and 1990s. Many of Lewis's questions about remain unresolved, despite his substantive contributions.

**Wesp, Julie (UC Berkeley), Alejandra Alonso (University of Calgary), T.**

**Kam Manahan (Kent State University) and Traci Ardren (University of Miami)**

[19] *Cloth Production and Economic Intensification in the Area Surrounding Chichén Itzá*

A central component of models for the rise of Chichén Itzá is the intensification of economic production and exchange. Evidence from recent excavation of a large platform at Xuenkal indicates cloth production may have been one of the primary craft activities that intensified during the Terminal Classic period. We present data on a concentration of spindle whorls from structure FN 129 and through comparison with regional evidence for textile production, suggest the inhabitants of Xuenkal were absorbed within the processes of economic centralization at work within the Chichén polity.

**Wesson, Cameron (University of Vermont)**

[82] *De Soto Never Slept Here: Archaeology and the Public Imagination*

The de Soto chronicles provide some of the first written descriptions of the Indigenous peoples and physical geography of the Southeast. These accounts are indispensable resources for archaeologists wishing to reconstruct first-contact Native American social, cultural, and political landscapes. As recent historiographic interrogation has demonstrated, however, these works are neither unproblematic in regards to the cultural practices of Indigenous peoples nor accurate in their depiction of regional geography. This paper examines the ways in which these narratives have been used to create an intimate link between the de Soto expedition and modern Southeastern locales, focusing specifically on the unusual case of Childersburg, Alabama.

[82] *First Chair* [82] *Second Organizer*

**West, Barbara (Chaco Culture NHP) [186] *Discussant***



**Wettstaed, James (Chattahoochee-Oconee NFs)**

[174] *The Resettlement Administration and the Historical Archaeology of the Georgia Piedmont*  
The Resettlement Administration was a 1930s New Deal program designed to combat rural poverty, especially that of southern tenant farmers. The agency bought up land and re-settled the inhabitants on new property. Most of what is today the Oconee National Forest was part of the Piedmont Plantation Project. The preserved records are an important data source for the archaeology of late nineteenth and early twentieth century sites in the Georgia piedmont. They include photographs, census data, and detailed records of purchased properties. Not only do these records provide site specific information, but they also provide an excellent regional context.

**Whalen, Verity [97]** see Kohut, Lauren E.

**Whallon, Robert (University of Michigan)**

[184] *Explaining Variability in Mousterian Lithic Assemblages*  
The "Mousterian question" has long challenged Paleolithic archaeologists, ever since François Bordes first defined his well-known Mousterian "cultures." Making a limited number of simple assumptions about the relationships between form and function in Mousterian lithics, we develop a model to explain the variability in tool frequencies among Mousterian assemblages. A rough test of the model using published data provides encouraging results, and, following this, some suggestions for future research in this area made.

**Wheeler, Derek [99]** see Galle, Jillian E.

**White, Andrea (Greater New Orleans Regional Archeologist- UNO) and Juana Ibanez (University of New Orleans)**

[163] *Protecting New Orleans: A Look at Colonial and Early American Defenses in the Crescent City*

Since the founding of New Orleans in 1718, city has always struggled to defend itself from environmental and human perils. Through the years, numerous protective structures were constructed in the region including at least five fortifications surrounding the famous French Quarter (Vieux Carré) during the colonial and early American periods. As the city expanded, these features were erased from the landscape. However, previous and recent archaeological investigations coupled with historical research has yielded insightful information about the military history in the city and altered some ideas we have about the archaeological record in New Orleans.

**White, Chantel (Boston University)**

[95] *Plant Remains from the PPNA Site of el-Hemmeh: Evidence for Paleoecological Conditions in the Wadi al-Hasa, Jordan*

Excavations during 2004 and 2007 at the site of el-Hemmeh, a multi-phase Neolithic site located in west-central Jordan, have revealed at least three circular structures dating to the Pre-Pottery Neolithic A period. As one of the only PPNA sites in the southern Levant situated outside the Dead Sea Basin, el-Hemmeh presents a unique opportunity to examine paleoecological conditions beyond the "core area" of PPNA occupation. Carbonized plant remains recovered from beneath sealed floor surfaces at el-Hemmeh are here compared with botanical data from other PPNA sites to examine variability in local plant resources and potential strategies for foraging and cultivation.

**White, Christine [130]** see Webb, Emily C.

**White, Christine D. [68]** see Howie, Linda

**White, Devin (ITT Visual Information Solutions) and Susan Ryan (University of Arizona)**

[40] *The Roads Most Taken? Modeling Practical Pedestrian Movement Between Great Houses in the Mesa Verde Region*

How people traveled between great houses within the Mesa Verde region of Southwest Colorado remains a largely unanswered question. While several formal and informal Chaco and post-Chaco road fragments have been documented, they paint an incomplete and potentially impractical portrait of human movement between sites. A geospatial predictive modeling framework that leverages least-cost analysis, graph theory, human biodynamics, and object-based multispectral landscape classification is used to investigate how people could have walked between great houses if their movement was not necessarily driven by ideology. The results are

compared to the known road fragments as well as historically documented routes.

[40] *First Chair* [40] *Second Organizer*

**White, Susan**

[28] *Chemistry and Forensic Archaeology –A Marriage Made In Heaven*

In the realm of forensic sciences, chemistry has been accorded its own discipline. Yet chemistry's influence may also be discerned within many other forensic disciplines. Chemistry's impact on forensic archaeology has, however, been restricted, if not ignored. An inadequate knowledge of chemistry has led to the promulgation of incorrect hypotheses; adipocere being a prime example. A study of chemistry also engenders a critical and challenging approach to evidence. Chemistry should thus represent one of the indispensable resources of a forensic archaeologist.

**Whitehead, William (Ripon College)**

[130] *Paleoethnobotany at Tiwanaku, Bolivia*

Plant remains recovered from excavations are an important line of information for discussing many aspects archaeological cultures. Tiwanaku is one of the rare sites in South America where paleoethnobotany has been used in conjunction with detailed excavations. The new paleoethnobotanical studies completed in 2008 will shed light on plant use and human-environmental interactions from the areas excavated by PAPA. Of special interest will be the use of local resources, food, ritual plants, and how botanical remains are distributed in the ritual districts core.

[99] *see Carpenter, Lacey B*; [99] *see Kochel, Meagan M.*; [130] *see Burgchardt, Lucy*

**Whiteley, Peter [66] Discussant**

**Whitley, David**

[112] *Sense and Essence in Native California Iconography*

Few aspects of the archaeological record seem less material than iconography, partly contributing to linguistic analytical approaches reflecting the modern European worldview. This bias contradicts indigenous theories of origin and being, and renders indecipherable much ethnographic commentary. Attention to indigenous knowledge instead demonstrates that rock art resulted from spiritual agency; that motifs were not signs but power objects that activated and could be activated by shamans; and that this made them dangerous. Daily avoidance matched against ritual supplication resulted. Recognizing iconography not as signs but as power objects has important implications for understanding the political prehistory of the far west.

**Whitley, Tamara (Bureau of Land Management) and Elyssa Gutbrod (Arizona State University, School of Geographical Sciences)**

[53] *A GIS Analysis of Spatial Data From the Carrizo Plain National Monument*

The application of GIS to archaeological data has proven to be a highly effective analytical tool. Using site inventories from the Carrizo Plain NM, we can address both management concerns and research hypotheses. GIS based site risk assessments and site location prediction models are useful for management planning. These same data are manipulated to explore prehistoric settlement patterns. In the Carrizo Plain, it has been observed that there is a temporal shift in site location and population density that may correspond to drying trends associated with the Medieval Climatic Anomaly. We examine these hypothesized spatial patterns using a GIS approach.

**Whitley, Thomas**

[14] *Conflict and Confusion on the Middle Savannah: The Late Seventeenth Century Occupation At Riverfront Village, Aiken County, South Carolina*

Riverfront Village is located on the South Carolina side of the Middle Savannah River. European trade goods and radiocarbon dates indicate that the latter occupation (1610 to 1730) is both concurrent with the founding of Charleston and predates the arrival of the Westo by perhaps 60 years or more. The site may have been raided, abandoned, and then reoccupied after the final destruction of the Westo in 1680. Untangling the confused overlap of historical references, archaeological occupations, and modern interpretations for the region is a distinct challenge. This excavation of this site provides a few more pieces to the puzzle.

**Whitridge, Peter (Memorial University of NL)**

[146] *The moment of movement: precontact Inuit colonization of the Okak area, northern Labrador*

The size and layout of the Inuit community at Green Island, near Okak, and the internal

organization of its dwellings, are comparable to those observed at other winter sites in northern Labrador. This site differs, however, in lacking the metal, glass and ceramics that are the hallmarks of an occupational spillover into the historic period. Given the relatively late date of Inuit colonization of the Labrador coast, and the early penetration of European goods north, this tightly constrains the period of occupation to the decades around AD 1500, and so provides an unusually clear window on the colonizing moment.

**Whittaker, John (Grinnell College), Emek Yildiz and Kathryn Kamp (Grinnell College)**

[50] *Turkish Flintknappers and Technological Change*

As threshing sledges became obsolete in the 1980s, the village of Cakmak, Turkey lost the industry that had made it a wealthy village, mining flints and knapping them into blades for use in the sledges. Knapping families increased investment in farming, applied their knowledge of stone working to other crafts, or migrated to urban areas. The general patterns of change visible in a late survival of lithic technology apply to many specialized crafts. At Cakmak, as elsewhere, we are in the last generation with the chance to record ethnoarchaeological observations of flint knapping.

**Whittington, Stephen (Wake Forest University), Andrew Workinger (University of Tennessee, Chattanooga), Jamie Forde (University of Colorado) and Jessica Hedgepeth (University of Colorado)**

[99] *Results of 2008 test-pitting to define the ceramic chronology around Teozacoalco in the Mixteca Alta of Oaxaca*

Mixteca Alta archaeological surveys rely on ceramics from the ground surface to date sites. Researchers apparently work with well-defined ceramic chronologies to do this, but publications typically do not provide details about ceramics except to relate them to types published by previous Alta or Valley of Oaxaca projects. Superficial treatment of ceramic chronologies makes it impossible to evaluate them or apply them to other projects. In 2008 the Teozacoalco Archaeological Project test-pitted sites to recover the ceramic sequence in the area of the Mapa de Teozacoalco and relate it to absolute dates. We present results, including images of diagnostic sherds.

**Whittlesey, Stephanie [87] see Mitchell, Douglas R.**

**Wichlacz, Caitlin (Washington State University)**

[18] *Complementary Compositional Analyses of Ceramics from Two Great House Communities in West-Central New Mexico*

Complementary high-tech and low-tech analyses of ceramics from the Pueblo II (ca. A.D. 1050-1130) great house communities of Cerro Pomo and Cox Ranch, reveal distinct differences within and between ceramic wares, especially brown and grey utility wares. The results of visual analyses of temper and fired paste color, coupled with electron microprobe assays of clay pastes provide data used to evaluate local ceramic production and distribution, and guide inferences related to the interactions and historical backgrounds of these communities.

[18] see Duff, Andrew I.; [18] see Krum, Cassandra E.

**Wicker, Nancy (University of Mississippi)**

[61] *Identity Formation and the Display of Migration Period Scandinavian Gold Bracteates*

Migration Period pendant amulets called gold bracteates are found far from their Scandinavian homeland in sixth-century graves across Europe from Anglo-Saxon England to Lombardic Pannonia. Rather than reflecting the migration of large groups of peoples out of Scandinavia, the distribution of bracteates reveals the mobility of segments of the population including itinerant smiths and elite women. The production and display of bracteates in distant lands also testify to their importance for the formation and maintenance of identity, and the continued use of the Scandinavian animal style points to the importance of visual culture in establishing and maintaining cultural ties.

**Widmer, Randolph (University of Houston)**

[165] *The Key Marco Site, A Planned Shell Mound Community on the Southwest Florida Coast*

The Key Marco site is a large 13.5 hectare planned village site on the southwest Florida coast. The site has 61 mounds with a volume of over 240,000 cubic meters of shell. The site contains a distinct elite residential precinct with 37 house mounds and a ceremonial precinct containing 6 temple mounds constructed of marine shell. Thirteen shell ridges, separated by canals, radiate from the elite residential precinct. All structures on mounds and ridges were built on pilings. The site has an occupational span of at least 1500 years in its present configuration with a population of 500.

Wiederhold, Jim [29] *see* Goebel, Ted

**Wiewall, Darcy (Antelope Valley College) and Linda A. Howie (University of Western Ontario)**

[102] *Vessels for Another Day: A Synthesis of Ceramic Production and Consumption at Lamanai, Belize, during the Postclassic to Spanish Colonial Periods*

Over the past two decades, conventional perceptions of Postclassic Maya society emphasizing a trajectory of "decline, decadence, and depopulation" have been reformulated, acknowledging the abundant evidence of community stability that accompanies changes in the material record. Recent research on patterns of ceramic production and consumption at Lamanai, Belize, is contributing to our knowledge of local complexity, through a focus on household and community level economic patterns. This paper examines the stylistic, technological and provenance relationships of the pottery comprising different assemblages dating to the Early Postclassic to Spanish Colonial periods.

[102] *First Chair*

**Wikell, Roger (Tyresta Forest Foundation) and Mattias Pettersson (Tyresta Forest Foundation)**

[85] *Show me your shore - and I can tell who you are*

Since Early Postglacial time Eastern Middle Sweden has constituted of vast archipelagos. In this Seascape good boats are crucial, and so are also safe harbours and landing-shores. Case studies of Mesolithic sealhunters, Bronze Age and Viking settlements will show how social important safe shores are for boat-carried people. At the shore identity was expressed to visitors.

Wilcox, Michael (Stanford University) [22] *Discussant* [22] *First Chair*

Wiles, Gregory [53] *see* Workman, Terry W.

**Wiley, Kevin (SUNY Buffalo)**

[96] *Broken Bones, Broken Bodies: Fractured Meanings of the Fragmented Dead at Herxheim*  
The late Linearbandkeramik "enclosure" site of Herxheim in Rhinland-Palatinate, Germany, offers a unique opportunity to explore issues of body, memory, and remembrance. Remains from at least 450 non-articulated individuals have been recovered from a series of ditches, which when taken together, forms an impression of an enclosure. After undergoing systematic post-mortem manipulation, skullcaps were deposited within these ditches. The relationship between this site and other late LBK sites in the region will be discussed along with interpretations of these mortuary practices in terms of place and embodiment.

**Wilke, Sacha (University of Calgary) and Sharisse McCafferty (University of Calgary)**

[101] *Ceramic Objects of Pacific Nicaragua: A Tale of Two Cities*

A wide variety of ceramic objects have been recovered from the Sapoa period (800-1250 CE) sites of Santa Isabel and Tepetate, on the Rivas peninsula of Pacific Nicaragua. Spindle whorls, net sinkers, ceramic balls, ear spools, and perforated sherd disks were among the hundreds of ceramic objects recovered at the two sites. This poster will present the data base of Pacific Nicaraguan ceramic objects, comparing the two sites to derive interpretations of cultural similarities and differences, which may relate to ethnic differences between the two areas.

Wilken-Robertson, Michael [47] *see* Gamble, Lynn H.

**Wilkes, Stephen (Harry R. Feldman Inc.), Charles Beach (Leica Geo- Systems) and Paul Foley (Harry R. Feldman Inc.)**

[69] *Surveying the Scene*

Providing effective survey control on any archaeological project is fundamental to repeatability and recording. The integration of geophysical, airborne, satellite and excavation data can be complicated enough. Factor in a three day time frame, multiple requirements of a TV series and ensuring everything ties together is all the more intricate. Time Team America has utilized a rich array of tools for site investigations. This has required an equally varied array of mapping control methods to be brought to bear. This paper presents the challenges faced in providing best practise survey control in a rapidly evolving archaeological and media environment.

**Wilkinson, Darryl (Columbia University)**

[141] *The Numismatic State: Iconoclasm and Political Subjectivities in the First Century of Islam*  
Focusing on the rise of the Umayyad Caliphate during the first Century of Islam, this paper considers the ways in which episodes of iconoclastic sentiment were generative of new forms of political and religious subjectivity. The first strong evidence for a recognizably Islamic state appears almost 70-80 years after the Muslim conquests of the 7th Century AD; namely the widespread adoption of a reformed 'Islamic' coinage in the former Sassanian and Byzantine territories. Such iconoclastic moments or crises of material representation are presented as key sites for the crystallization and codification of ideologically-bound practices.

**Wilkinson, Keith [50]** see *Areshian, Gregory E.*

**Wille, Sarah (Field Museum)**

[5] *Archaeological Collections, Educators, and Object-Based Learning at The Field Museum*  
Archaeology museums present artifacts and stories about peoples and lifeways. These spaces also serve as object repositories. For example, The Field Museum in Chicago was established to store the many collections from the 1893 World's Columbian Exposition. Whether on display or behind-the-scenes, collections provide a unique teaching and learning opportunity for those inside and outside of academia. This paper describes how the Field Museum collections are invaluable for the training of teachers in 'object-based learning', a strategy that emphasizes the investigation of material culture to learn about an object and its relationship to other objects, peoples, and ideas.

**[185]** see *Andres, Christopher*

**Williams, James (University of Pittsburgh)**

[155] *Sampling and scales in regional survey of the Altai*

A sampling methodology can be utilized in regional survey develop testable hypotheses while at the same time provide useful comparative data. Using systematic pedestrian survey will result in data that has both high resolution and has regional contexts. This paper will discuss the results of this methodology as implemented in the Mongolian Altai. The combination of high resolution and regional scale revealed differing patterns in landscape over time in the Bronze and Iron age that can be implemented into full coverage survey and tested or stand alone as indicators of landscape patterns.

**Williams, Jay (Texas Tech University)**

[112] *The Landscape is Alive: Metaphor, Metonymy, and Landscape Animation.*

Stemming from discourse analysis, I investigate metaphoric and metonymic representations of the earth's surface in Navajo place names. Metaphoric and metonymic forms allow a place to be unambiguously located in relation to others. The possession of shared knowledge which place names represent and the narratives in which they are embedded enable an oral cartography. The landscape is alive with deities and their associated events. Knowing how they are mapped to the landscape and their chronology allows navigation and passage. In essence, the stories walk us through the landscape.

**Williams, Joel (CAIRN Group), Ann Scott (University of Texas at Austin), Jon Beard (Springfield Plateau Grotto), Scott Buskey (URS) and Susie Jansen (URS/CAIRN)**

[67] *Following the Footsteps into Lon Odell Memorial Cave, Missouri*

In 1985 the Lon Odell Memorial Cave was discovered after a sinkhole collapse. The cavers exploring the new discovery found prehistoric footprints, animal tracks, and torch fragments deep within the cave. Studies by archaeologists and paleontologists yielded identification of bear and cougar tracks, bear beds, and the radiocarbon dating of torch samples, which dated to 1400 AD. This paper will present the results of a recent mapping project that documented the full extent of the human footprints, various animal tracks, and other significant features in the cave.

Interpretations on the use of the cave by Native Americans will be offered.

**[67]** *Second Chair* **[67]** *Second Organizer*

**Williams, Justin and William Andrefsky Jr. (Washington State University)**

[88] *Technology, Style and Practice: An Examination of Debitage*

Researchers interested in understanding lithic technological practices have assumed that chipped stone debitage can provide clues and insights into tool production behaviors. This paper examines commonly recognized and cited debitage characteristics created from a series of replication experiments. Raw materials type, quality, and package size were held constant while six different flint knappers reduced nodules using bifacial technology and rotated core technology.

Results of the study reveal that individual knapping styles had as much to do with variability in debitage characteristics as production technological differences. This suggests that learned reduction strategies may be archaeologically visible from debitage attribute analysis.

**Williams, Mark [157]** *see Chamblee, John F.*

**Williams, Patrick (Field Museum Anthropology), Abigail Levine (UCLA), Charles Stanish (UCLA) and Laure Dussubieux (The Field Museum)**

[174] *Ch'iyar Qala: Basalt Sourcing in the Andean Altiplano*

Basalt is one of the Andean altiplano's most desired stones for building material, monolithic sculpture, and agrarian implements. The black stone's distribution is limited to certain outcrops most commonly found in the southwest Titicaca Basin. This study uses p-XRF and ICP-MS to conduct a preliminary assessment of chemical variation in basalt outcrops in the southwest Basin and compares them to basalt monoliths in the north basin. The results indicate that even closely spaced geological outcrops can be chemically discriminated, but the paucity of matches to north basin monoliths suggests many sources are yet to be characterized.

**Williams, Ryan Patrick [12]** *see Morrow, Giles S.*

**Williams, Travis (Vanderbilt University)**

[97] *The Restructuring of Social Spaces and Practices in a Trans-Conquest Andean Settlement*

This paper examines the effects of the Inka and Spanish conquests on the relationship between space, practice, and identity at a settlement in the Colca Valley, Peru. Through the preliminary analysis of excavations conducted in a small Inka administrative structure at the site of Malata, we ascertain the (re)construction of a civic-ceremonial space, and by extension, the degree to which such changes to the built environment might have affected social practice and identity. This analysis suggests that changes in state power correspond with changes in local practices and identities, but reveals a degree of continuity of these themes across conquest(s).

**Willis, Lauren (Southern Methodist Univer), Andrew Boehm (Southern Methodist University) and Torben Rick (Smithsonian)**

[85] *Coastlines, Canyon Bottoms, and Rockshelters: Human Settlement Strategies in Lobo Canyon, Santa Rosa Island, California*

Systematic survey of Santa Rosa Island's Lobo Canyon and adjacent coastline identified over 20 archaeological sites. Surveys in the 1980s-1990s focused on the coastline and area adjacent to a public hiking trail, identifying several Middle to Late Holocene shell middens. Our 2008 survey focused on interior portions of the canyon bottom, ridges, and rockshelters that have historically received less attention from Channel Island scholars. Our survey revealed a variety of site types (shell middens, lithic scatters, rockshelters, etc.) and has important implications for understanding the diversity of island settlement patterns, including land use, resource exploitation, and mobility.

**Willis, Samuel [47]** *see Davis, Loren G*

**Willman, John [138]** *see Waterman, Anna J.*

**Wilmsen, Edwin [145]** *see Rosenstein, Dana D.*

**Wilshusen, Richard (Colorado College)**

[144] *East of the La Plata River: Is It the Periphery of Mesa Verde or Chaco, Neither, or Both*

The area to the east of the La Plata River has variously been regarded as the Eastern Mesa Verde subregion (Totah) or the northern edge of the Chacoan great house system. An examination of the history of archaeological research in this region and the cultural shifts over the last two millennia demonstrates that neither characterization adequately describes the archaeological record of this region. At times it appears to have influenced Mesa Verde and Chaco as much as they influenced it.

[144] *Second Chair [144] Second Organizer*

**Wilson, C. Dean [144]** *see Toll, H Wolcott*

**Wilson, David (University of North Florida)**

[32] *Using Google Earth to Manage and Present Site Survey Data*

Google Earth is an interactive globe that uses satellite imagery to display features on the Earth. Google Earth also includes layers which can be displayed on top of the satellite imagery including

roads, political boundaries, and three-dimensional buildings. Google Earth is an excellent tool for site surveys and other archaeology projects because it is relatively inexpensive, easy to use, and flexible. This poster will demonstrate the use of Google Earth as a tool for managing and displaying the results of site surveys using data collected in the Casas Grandes region.

**Wilson, Gregory (UC-Santa Barbara)**

[42] *Residential Status Distinctions at Early Moundville*

Recent archaeological research has revised and overturned important aspects of earlier hierarchical models of Mississippian political economy in the Black Warrior Valley. Due to these interpretive changes it is necessary to rethink relations of inequality in the region. With this goal in mind this paper highlights evidence of status distinctions within early Mississippian residential groups at early Moundville.

**Wilson, Nathan (Arizona State University)**

[99] *Infield or Outfield: Applying Killion's Houselot Model to Surface Artifacts at Classic Period Teotepec*

Intensive survey in and around the Classic Period center of Teotepec alluded to the possibility of an on-site focused agricultural regime. Surface collection from the 2007 Proyecto Arqueológico Teotepec (PAT) field season provides a high-resolution collection across much of the site. If specific patterns of material remains (indicative of specific spatial patterns of residential use areas associated with differential agricultural foci) can be identified, then the nature and focus of Classic Period Teotepec agriculture can be better identified and help guide future research directed towards the subsistence strategies of the inhabitants of Teotepec.

**Wilson, Shannon L. [12]** see *Berryman, Carrie Anne*

**Wilson, Wayne (ATSAA)**

[174] *Use of Laser Induced Breakdown Spectroscopy (LIBS) for Raw Material Sourcing*

A Laser Induced Breakdown Spectroscopy (LIBS) system was used in analyzing a number of artifacts (i.e. projectile points or chips) and sources (i.e. quarries) of the raw material found in Western Colorado. The use of the system allowed source determination (by "fingerprinting") for a number of the artifacts. The poster session describes the LIBS system and its use in the field, the result of the analysis and sourcing of the artifacts.

**Windes, Thomas [171]** see *Van West, Carla R.*

**Windham, Jeannine (New South Associates, Inc.) and Leslie E. Branch-Raymer (New South Associates, Inc.)**

[80] *Patterns of Archaeobotanical and Zooarchaeological Exploitation, Long Swamp Site (9CK1), Cherokee County, Georgia*

Archaeobotanical and zooarchaeological assemblages from the Long Swamp site (9CK1), Cherokee County, Georgia, provide a platform for the study of the interaction of the Mississippian residents of this stockaded village site with their environment. Well-preserved floral and adequate faunal remains allow assessment of anthropogenic alteration of the local environment, patterns of resource exploitation, site seasonality, variation of floral and faunal resources, and intrasite patterning of subsistence remains. Our goals are to document and assess the role of faunal resources, agricultural products, and collected plants in the Mississippian subsistence system of these Etowah Valley people, from an ecological and systems perspective.

**Windy Boy, Alvin [88]** see *O'Boyle, Robert C.*

**Winemiller, Terance (Auburn University at Montgomery) and Virginia Ochoa-Winemiller (Auburn University at Montgomery)**

[117] *The Telica Connection: Community and Lifeways at Chichicaste and Dos Quebradas, Honduras*

In this paper we discuss the results of ongoing multidisciplinary research at Chichicaste and Dos Quebradas, Honduras. Fieldwork revealed communities having diverse settlement and architectural features that point toward differential access and varied socio-political complexity. Cultural materials recovered at both sites suggest that the ancient inhabitants were involved in local and regional interactions with groups living in and beyond the Intermediate Area. The evidence we present supports a model of involvement in exchange networks extending into Mesoamerica and southward into other parts of Central America.

[117] *First Chair*

**Winkler, Daniel (University of Wisconsin-Milwaukee)**

[190] *The Late Paleoindian Occupation of the Dalles Site (47IA374), and its Implications for the Plainview Tradition in the Western Great Lakes.*

The focus of this paper is to examine the lithic assemblage from the Dalles site (47IA374), a Plainview occupation in southwestern Wisconsin. The materials from the site will be examined in detail using an economic efficiency perspective in order to provide inferences about the organization of lithic technology at Plainview sites in the western Great Lakes. This work follows up and expands upon the lithic data published by David Overstreet and others (2005).

**Winterhalder, Bruce [83]** see *Prufer, Keith M.*

**Winterhoff, E. Quent**

[147] *Material Manifestations of Landscape Control in Prehistoric Samoa: Spatial Analysis on Large-Scale Stone Tool Production Sites in Tutuila, American Samoa*

Polynesian stone adzes were utilized by specialists manufacturing status items and were exchanged widely as part of inter-societal trade networks. These data establish that this artifact class is vital in charting status changes within Samoa's prehistoric polities, and in this poster, I examine how changes in adze manufacture may allow us to monitor increases in elite control over basalt resources during the late Traditional period on Tutuila Island.

**Wismer, Meredith (University of Iowa)**

[41] *A New Analysis of Bison Subsistence at Cherokee Sewer, Iowa*

The Cherokee Sewer (13CK405) is a late Paleoindian to Middle Archaic archaeological site located in the northwest corner of Iowa, which was extensively excavated in 1976. It is one of the eastern most bison localities for the plains. Beyond the preliminary research published in the early 1980's, more recent studies of the collection have examined bison dentition and fetal remains. Change in subsistence habits involving bison exploitation between the Paleoindian and Archaic assemblages will be assessed using modern quantitative methods on the postcranial bison remains in combination with results based on bison dentition.

[41] *First Chair*

**Wiseman, Sarah [91]** see *Emerson, Thomas E.*

**Witsell, Alexandra (University of Chicago)**

[11] *Physical Urban Form in Third Millennium BC Khafajah, Southern Iraq*

The piecemeal nature of the southern Mesopotamian evidence for urban form has left many researchers of the "first cities" frustrated, while fostering a scholarly discourse largely based on comparison and analogy. More familiar to modern urban studies or North American archaeology, the "city as artifact" approach seeks to understand urban form as a palimpsest of varied economic, social, political, and natural processes. Third millennium BC Khafajah provides widespread physical evidence for the transition between two distinct political regimes, the Early Dynastic and Akkadian periods. This paper seeks to conceptualize the dichotomy of an "archaeological/physical" city caught in a "political/historical" transition.

**Wobst, H Martin (University of Massachusetts) [22]** *Discussant [173]* *Second Organizer*

**Wohltjen, Hannah [31]** see *Forsyth, Danielle*

**Wolff, Christopher (Smithsonian Institution)**

[126] *Pithouses and Ideology: Examining Socio-cultural Elements in Northern Dwellings*

Pithouses have been found throughout northern communities. Their prevalence is due to the benefits they provide for relatively small cost. Pithouses offer excellent thermal regulation, construction can be done quickly and durably, and they efficiently use building materials. While these characteristics are universal, socio-cultural elements can vary significantly. Pithouses—like complex dwellings—are designed, organized, and used according to social and ideological constructs. Recent research in Labrador and Iceland indicates ideology can also affect their abandonment. This paper evaluates the role of pithouses, with a focus on the Archaic period of Labrador and Settlement farms of Iceland.

**Wolff, Nicholas (Boston University), John Robb (Cambridge University) and Meredith Chesson (Notre Dame)**

[124] *A Late Bronze Age House? Excavations at Sant'Aniceto*

This poster presents results from two seasons of work at the hilltop domestic site of Sant'Aniceto, where exploratory excavations have partially revealed the wall of a large circular structure dating



to the Late Bronze Age. In conjunction with architectural and artifactual study, the anthropogenic sediments filling this feature and an adjacent buried ground surface are the subject of micromorphological analysis as a means of approaching site formation and human behavior in the built environment. Underlying our research is the development of a household archaeology for this period and place, situated within the context of the larger region's Bronze Age residential landscape.

[124] *First Chair*

**Wolff, Nicholas [155]** *see Ozguner, Nimet Pinar*

**Wollwage, Sarah [41]** *see Lev-Tov, Justin S.*

**Wolverton, Steve (University of North Texas), Andrew Barker (University of North Texas), Barney Venables (University of North Texas) and Stanley Stevens (University of North Texas)**

[130] *Archaeoproteomics: Quantification, Extraction, and Characterization of Protein Residues from Experimental Cooking Pottery*

The potential for protein residues to bind to pottery and preserve such that extraction and identification is plausible is poorly understood. In this study, multiple cooking experiments using known quantities of isolated and mixed animal proteins were undertaken to determine the concentrations at which proteins sorb to pottery clay-mineral matrices using total organic carbon analysis. A variety of extraction techniques are evaluated in terms of the quantity and quality of protein residues removed after cooking experiments. Our results suggest that approaches to extraction and characterization of protein residues from archaeological pottery are feasible and require more technical attention to attain methodological refinement.

**Wolverton, Steve [53]** *see Nagaoka, Lisa; [18]* *see Barker, Andrew L.; [18]* *see Randklev, Charles R.*

**Wolyneec, Renata**

[103] *The Haunting Mysterious Past: Archaeology from Time/Life Video*

Since the middle 1990s, Time/Life Video has offered a variety of video series about archaeology to teachers and interested publics. "Archaeology," "Lost Civilizations," and "Ancient Voices" are series which often envelop archaeological content in a shroud of emotion, mystery, and adventure. This paper identifies and evaluates some overt and covert messages about archaeology found in these series.

[103] *First Chair*

**Wood, Amy (Versar, Inc. - Fort Lee) and Christopher McDaid (US Army)**

[88] *17th Century Predictive Modeling in the Chesapeake*

The Chesapeake Bay region has long been the focus of archaeological investigations in ongoing attempts to discern its history. Current research, funded by the Department of Defense's (DoD) Legacy program, applies predictive modeling to the 17th Century Chesapeake region in an attempt to better understand settlement patterns of the region and to assist in management of 17th Century site locations on DoD lands. Using attribute information acquired from known 17th Century sites in Virginia and Maryland, along with several environmental factors, a GIS data layer is being developed to highlight areas of high, moderate, and low predictability.

**Wood, Karenne [173]** *see Hantman, Jeff*

**Wood, M. Jared (University of Georgia)**

[56] *Signs of Hierarchy? Mississippian Period Social Organization in the Interior Coastal Plain*  
Mississippian period research in the Southeastern U.S. has traditionally focused on hierarchical social organization. Chiefdoms have been invoked from ethnohistoric accounts in literature; elaborate burials, monumental architecture, and exotic goods from excavations; and assumptions of pan-southeastern phenomena. Recent authors have criticized this approach, suggesting that the key to understanding Mississippian period social organization lies in abandonment of the chiefdom model or acceptance of variation in late prehistoric sociopolitics. To investigate these competing views of Mississippian sociopolitical organization, data from sites in the interior Coastal Plain of Georgia and South Carolina are discussed.

**Wood, Marilee [168]** *see Fenn, Thomas*

**Woodfill, Brent (University of Louisiana)**[67] *Ancient Maya Cave Ritual in Central Guatemala*

Since 2001, members of the Northern Verapaz Settlement and Sacred Site Survey have been investigating caves in Central Guatemala. A wide range of ritual activity has been recovered, from large-scale public displays to closed, intimate ceremonies. This paper examines the different types of ritual activity recovered and the functions they had in ancient Maya society—not only religion, but economy, politics, and transit.

**Woods, Alexander (University of Iowa)**[184] *An Investigation of Aurignacian blades and blade blanks from Abri Cellier housed at the Logan Museum of Anthropology*

Excavated in 1927, Aurignacian materials from the Abri Cellier have been housed at the Logan Museum of Anthropology in Beloit, Wisconsin for the past 80 years. This presentation outlines the results of an examination of the relationship between lithic raw materials and the metrical dimensions of Aurignacian blade blanks from the Abri. This is followed by a discussion of both the importance and difficulties of working with older museum collections which may not have been collected under the most scientific of circumstances.

**Woods, Julie (UMASS Amherst)**[173] *Thinking Outside the Vessel: Variability in Native Ceramics of the Northeast*

In the Northeast's Connecticut River Valley, traditional scientific approaches to ceramic analysis can be misleading. Algonquian people created well crafted ceramics exhibiting a great deal of variability in production technique and functional use. Yet, due to harsh conditions for preservation, it is rare to find whole vessels and more common to find a wide variety of sherds designed and produced using different techniques. The question to be explored in this paper is: How can Indigenous perspectives change the way archaeologists look at Native ceramics, the people that made them and our approach to analysis?

**Woodson, Mark and Angela Keller (University of California Riverside)**[174] *Virtual Data: Making Web-based Data Sharing Work for Archaeology*

The internet has revolutionized the way we conduct research and interact with our colleagues, but few archaeological projects have committed to sharing their data via the web. Projects that have created web-based systems face myriad problems from unwieldy data structures and faulty website architecture to complex and confusing user interfaces. Although a growing number of archaeologists are interested in sharing data via the web, most of us lack the time and skills necessary to create a successful website. This poster outlines a flexible and proven approach to web-based data sharing created by information technology professionals working collaboratively with archaeologists.

**Woollett, James [146] see Woollett, Jim M.**

**Woollett, Jim (Universite Laval) and James Woollett (Universite Laval)**[146] *A regional perspective on Little Ice Age impacts on Inuit settlement patterns and subsistence in Dog Island, Labrador.*

The Dog Island area of northern Labrador consists of a cluster of small islands located within the range of inter-annual variation of the seaward edge of land-fast sea ice. Several winter settlements, occupied for variable lengths of time during the Little Ice Age (LIA), are scattered among these islands. Recent multidisciplinary research at five of these winter settlements are reviewed in order to examine links between site location, subsistence and sea ice conditions, focusing on zooarchaeological reconstructions of hunting practices and seasonality at multiple sites, the application of high-resolution dendrochronological dating and sea ice modeling.

**Workinger, Andrew [99] see Whittington, Stephen L.**

**Workman, Rik [53] see Workman, Terry W.**

**Workman, Terry (The College of Wooster), Benjamin Stone (The College of Wooster), Brittany Rancour (The College of Wooster), Gregory Wiles (The College of Wooster) and Rik Workman (The College of Wooster)**[53] *The Wiles Site (Morgan Complex) in Wayne Co., Ohio: Local Prehistory and Climate Change*  

Systematic surface survey of the Wiles site near Wooster, Ohio identified historic and prehistoric components. GPS coordinates were recorded for diagnostic artifacts to establish a time line of occupation. ArcGIS was utilized for the spatial analysis of locational data. The analysis of the

diagnostic artifacts revealed that the Wiles site was occupied from the Early Archaic- Late Prehistoric Period. Additional research examined the possibility of an abrupt climate change during the Late Woodland period. Utilizing pollen samples obtained from northern Ohio lake sediment cores, a reconstruction of Late Woodland climate was developed and cross-referenced to northern Ohio archaeological sites.

**Worman, F. Scott (University of New Mexico)**

[18] *Transforming Archaeology: untangling post-depositional processes at LA 26917 in the Valles Caldera National Preserve (VCNP)*

People accessed obsidian quarries and other resources in the Caldera throughout the Holocene, leaving behind various materials including millions of flaked stone artifacts. Post-depositional processes have impacted this archaeological record significantly. To address the resulting interpretive difficulties, studies of soils and geomorphology were combined with bulk lithic analysis and obsidian hydration. The data were analyzed in light of process-based models of bioturbation and landscape change. The results provide a foundation for building inferences about the past and suggest directions for future research. They also imply that nuanced approaches to post-depositional disturbance are useful in general and necessary in some contexts.

[174] see Herhahn, Cynthia L.

**Worth, John (Univ. of West Florida)**

[171] *Inventing Florida: Constructing a Colonial Society in an Indigenous Landscape*

Beginning with the 1513 discovery of Florida, Spanish explorers and colonists embarked on a lengthy process to incorporate the American Southeast into the expanding Spanish colonial empire. Concurrently attempting to establish colonial bases along the coast and to penetrate and fortify the vast interior, Spanish efforts throughout the sixteenth century were significantly constrained and shaped by the political organization and social geography of the indigenous societies already inhabiting the landscape. The resultant configuration of the multi-ethnic colonial society that was Spanish Florida at the beginning of the seventeenth-century reflected a unique accommodation between Spanish and Indian political and economic systems.

**Wright, Alice [130]** see Pereira, Carlos M.

**Wright, Henry (University of Michigan) [42]** *Discussant*

**Wright, Joshua [126]** see Jackson, Sarah E.

**Wright, Lori [169]** see Buikstra, Jane E.

**Wright, Rita (New York University) [39]** *Discussant* [137] *Discussant* [166] *Discussant*

**Wright, Wendy Ann (Portland State University) [79]** *Discussant*

**Wriston, Teresa (University of Nevada, Reno)**

[3] *Excavations at Impala and Ngabaa Shelter, Hwange National Park, Zimbabwe*

Excavation within two rockshelters in Hwange National Park, Zimbabwe revealed a rich Late Stone Age assemblage within relatively intact stratigraphic contexts. Numerous charcoal-ash layers and a rockfall event serve as stratigraphic markers and will provide temporal and relative age control within the shelter's upper cultural layers. Radiocarbon assays and analysis of a sample of the cultural assemblage are expected to reveal prehistoric adaptations to a changing Middle-to-Late Holocene environment.

**Wrobel, Gabe [185]** see Awe, Jaime J.

**Wu, Xiaolong**

[62] *The New Uses of Old Images: Artifacts of the Zhongshan State in Ancient China*

Outsider groups who established themselves as rulers in ancient China used various artifacts to display political power and cultural identities beneficial to their regimes. Discoveries from tombs of two generations of Zhongshan Kings (4th century BCE) and its capital city of Lingshou in central Hebei Province revealed how Zhongshan rulers created and displayed artifacts to forge public images that signify new identities in relation to other states and ethnic groups. This paper discusses how artifacts from both the Zhou system and the Northern groups were adopted and transformed in the display to convey complex new meanings for the Zhongshan rulers.

**Wyatt, Andrew (U of Illinois at Chicago)**[185] *Local Water Management Practices among the Ancient Maya*

Recent research suggests that ancient Maya water management techniques were centralized and controlled by elites residing in urban centers. However, survey and excavations at Chan in western Belize revealed water management systems operating entirely at the local level. Small aguadas, irrigation canals, and natural springs associated with agricultural terraces demonstrate that many forms of water management at Chan were outside the direct control of nearby elites. While Maya elites may have controlled the collection and distribution of water in and around their centers, evidence of local water management practices demonstrates that Maya farmers retained significant autonomy.

Wyatt, Andrew [36] *see Tomasic, John J.***Wyatt, Scott (Washington State University), Brian Kemp (Washington State University), Cara Monroe (University of California Santa Barbara and Washington State University) and William Lipe (Washington State University)**[18] *Domestic Turkeys in the American Southwest: Imported Birds or an Independent Domestication Event?*

Ancient DNA analysis of the extinct *Meleagris gallopavo gallopavo* from central Mexico and 1600-2100 year-old turkey coprolites from the Turkey Pen Ruins site in southeastern Utah provides evidence on the origin of the domestic turkey in the Southwest. All the Utah coprolites were from Merriam's turkeys (*M. g. merriami*), a subspecies that is genetically distinct from the central Mexican variety. These data, coupled with those from present-day wild turkeys, indicate that domestication in the Southwest was independent of that in central Mexico. Conserved matrilineal in the archaeological examples provide evidence of controlled breeding by Basketmaker II peoples.

**Wyllie, Cherra (University of Hartford)**[24] *After the Olmec: Southern Veracruz Monumental Sculpture*

Inhabitants of the Mixetquilla-Tuxtla region of south-central Veracruz inherited the cultural legacy of their Gulf Olmec forebears manifest in a highly developed visual vocabulary, with monumental sculpture a key feature in ceremonial space. From the 1st Century BCE -10th Century CE, Epi-Olmec artists continued this tradition at sites such as Tres Zapotes, La Mojarra, and Cerro de las Mesas. Iconography and hieroglyphs exhibit gradual change through time, while incorporating external influences from their Mesoamerican neighbors. In this paper I examine this cohesive body of sculpture, as part of regional processes, through the shifting lens of temporal styles, motifs, and religion.

**Wymer, DeeAnne (Bloomsburg University) and Judith Steinhilper (Bloomsburg University)**[52] *The Golden Harvest: Recent Research into Monongahela Paleoethnobotany*

This poster presents the results of the paleoethnobotanical analysis of a series of flotation and macrobotanical samples procured as part of the several recent projects focusing on understanding the environmental and social context of Monongahela archaeology within western Pennsylvania. Several sites, including the Johnston and Brant sites, will be the primary focus as well as introducing data from other related Late Prehistoric occupations within the surrounding region. We will thus compare and contrast the Monongahela data with other regional Late Prehistoric paleoethnobotanical assemblages. This new database provides insights into a little explored research component for the Monongahela, informing our understanding of the subsistence base and human-environment interaction for this archaeological population.

**Wynne-Jones, Stephanie (British Institute in Eastern Africa) and Jeffrey Fleisher (Rice University)**[86] *Swahili urban landscapes on the east African coast*

The dozens of tenth- to fifteenth-century Swahili stonetowns along the East African coast are understood as urban centres characterised by their mercantile function. Recent archaeological research focusing on the relationship between towns and their hinterlands has exposed great diversity among towns, and led to a reanalysis of what urbanism means in this area. This paper presents the results of research at two cities, one each from the northern and southern Tanzanian coast, to explore the potential of Swahili towns for a reconsideration of how urban spaces are constituted and lived, especially in the context of their hinterland populations.

Xia, Yunju [143] *see Parkinson, William A*

Xie, Liye [145] see Jiang, Leping

**Xochipiltcatl V, Sandra (UC-Riverside)**

[111] *The patlache: one example of sacrificial objectification in the Huasteca, San Luis Potosí, México.*

Human sacrifice in prehispanic Mesoamerica, as a cultural and symbolic act, has been perpetuated after the conquest through the sacrifice of some animals such as chickens, in important community ceremonies. The purpose of this paper is to analyze the processes of perception and representation that these contemporary sacrifices imply and the way in which they are related, or not, to ancient sacrifices. This will be achieved through the analysis of the patlache, a large tamale that is part of the offerings particular to the Huastec area, made for certain ceremonies of gratefulness and healing.

**Yacubic, Matthew (University of California Riverside) and Timothy Pugh (Queens College/CUNY)**

[102] *Obsidian Tool Production and Distribution in a Postclassic Lowland Maya Community*  
Obsidian was an important resource used by the Maya for a variety of purposes. This paper will examine the local production and distribution of obsidian tools based on the technological study of artifacts collected from excavations at Zacpetén. This site is a Postclassic to Contact period community in the Petén lakes region of the Maya lowlands, and it was an important regional center for the Kowoj. By looking at the different contexts where obsidian tools were produced and consumed, inferences can be made about the dynamics that organized this ancient community.

**Yaeger, Jason (Univ. of Wisconsin - Madison)**

[169] *A Conjunctive Approach to Understanding the Classic Maya Collapse*

Robert Sharer is well known for the advances he has made in understanding the origins of Maya civilization, but he has also contributed to our understanding of the Classic Maya Collapse, as demonstrated by Quirigua Project. Drawing on data from the Central Maya Lowlands, this paper examines how the research paradigm Sharer has championed—including the conjunctive approach, a focus on the social aspects of the ancient past, and close attention to empirical data—leads to more nuanced understandings of the collapse at both local and regional scales, and points us to new investigative methods and collaborative research programs.

[149] *First Chair*; [83] see Hodell, David; [83] see Iannone, Gyles

Yagodín, Vadim N. [145] see Brite, Elizabeth B.

**Yamamoto, Naoto (Nagoya University) and Akitoshi Iwase (Nagoya University)**

[165] *Specialized clam-processing sites of the final Jomon period in Central Japan*

Seven large shell mounds excavated in the Mikawa bay are called *ī; 1/2gMuro shell mounds* *ī; 1/2h* in the final Jomon Period (c.3300-2500 cal BP). Onishi shell mound, which is the biggest one of them, is 185 meter in length and 2.5 meter in depth of the layer. There are two peculiarities about them. The first is that they don't include fish bone, animal bone, fishing implements and pottery but only shell. The second is that clam (*Meretrix lusoria*) occupies over 90 percent of the whole shell. We estimate Jomon people boiled and dried clams to exchange and trade.

Yant, Anna Catesby [154] see Gallareta Cervera, Tomas

Yepez Alvarez, Willy [45] see Kellner, Corina M.

**Yerka, Stephen (Archaeological Research Lab), Daniel WH Brock (University of Tennessee, Archaeological Research Laboratory), Kandace D. Hollenbach (University of Tennessee, Archaeological Research Laboratory) and Nicholas P. Herrmann (Mississippi State University)**

[53] *Structures and Processing in Townsend Archaeology: Intra-site spatial analysis of a Woodland occupation in the foot hills of the Great Smoky Mountains, Tennessee*

The Townsend Archaeological Project uncovered over 20,000 archaeological features, 82% of which are posts. Archaeological deposits at Townsend represent a non-stratified multi-component site, which presents a suite of problems for understanding site structure diachronically. Intra-site spatial analysis of geographic and relational attribute databases is used to designate Woodland structures and activity areas. These features are then examined across the site and by temporal affiliation. This research provides a quantitative method to clarify contextual ambiguities that arise in temporally complex archaeological sites.

Yerka, Stephen J. [88] *see Anderson, David G.*

**Yerkes, Richard (Ohio State University) and Attila Gyucha (Archaeological Service of the Ministry of Cultural Heritage (KÖSZ), Hungary)**

[143] *Time and Tradition in an Early Copper Age (ECA) Community in Southeastern Hungary*  
Körös Regional Archaeological Project investigations at adjacent ECA sites documented changes in community and household organization during the transition to the Copper Age. Calibrated radiocarbon dates were used to develop temporal contexts for these changes. Bayesian analysis with BCal and OxCal programs showed that the small fortified sites were occupied contiguously in phases of 30-50 years. The younger site was established before the older was abandoned. When large nucleated Late Neolithic (LN) communities dispersed and established small ECA settlements, the pattern of vertical accretion that created the LN tells morphed into a pattern of lateral accretion at the smaller communities.

Yildiz, Emek [50] *see Whittaker, John C.*

**Yim, Robin**

[18] *Pottery Analysis of the East Ruin of the Aztec Ruins*

Much of what we know about the East Ruin at Aztec Ruin National Monument is derived from Roland Richert's excavations in the early 1960s. In his thorough account of his excavation results, Richert reported on the types of pottery present and the sherd counts from each provenience. Additional analysis on these collections has not yet been done, however. Here, I present the results of new quantitative and stylistic analyses from a sample of first and second story rooms, and I use these results to discuss the use and exchange of pottery during the occupation of Aztec East.

**Yonekura, Kaoru (Tokyo Metropolitan University)**

[77] *Microhardness analysis of Palaeolithic stone tool materials: Toward understanding on primary material selection and utilization in Japan*

The physical properties of Paleolithic raw materials could have significantly influenced various stages of tool manufacture and the tool performance. For comprehensive understanding of material selection and utilization in Paleolithic age, as one of the influential properties of lithic materials, microhardness was analyzed on four different types of rocks that were frequently used in Japan. It was found that the microhardness values of the samples were invariably ranging from approximately 5 GPa to more than 10 GPa, which are similar to those of advanced ceramic materials used to manufacture modern cutting tools.

**Yoon, David**

[124] *Local land use in regional and extra-regional context: survey evidence from the Bova Marina Archaeological Project*

Intensive survey around Bova Marina and Bova in southern Italy offers the opportunity to observe changing patterns of land use in a region of steep environmental gradients, ranging from sea level to 1300 meters above sea level within a distance of less than 13 kilometers. Despite severe erosion and intensive occupation in the recent past, the survey evidence suggests a sequence of changes in settlement pattern showing how land use was shaped not only by local environmental conditions but also by the interaction of local social forms with larger sociopolitical and economic structures.

**Yost, Chad (Paleoresearch Institute)**

[176] *Recent Applications of Plant Opal Phytolith Analysis of Coprolites, Privies, Sherds and Stratigraphic Columns*

Plant derived opal silica microfossils called phytoliths are increasingly used in archaeological and paleoenvironmental studies to better understand climate, environment, diet, agriculture, and plant resource utilization. At PRI we have applied phytolith analysis to an extremely wide variety of artifact-types and stratigraphic contexts. This poster highlights just a few of our phytolith results from the last two years. Specific examples include analysis of coprolites (12.3K RCYBP) from the Paisley Caves in Oregon, recovery of white rice (*Oryza*), banana (*Musa*), and cereal grain phytoliths from historic privies, and identification of grass matting from the Eagle Point Rock Shelter in Colorado.

**Young, Lisa (University of Michigan)**

[31] *Dynamic Learning: Archaeology, Undergraduates, and Outreach at Homol'ovi*

Integrating public outreach into a field school setting creates a dynamic learning environment for undergraduate students but also poses challenges in the field. This poster summarizes the ways in which the Homol'ovi Undergraduate Research Opportunities Program (HUROP) provided undergraduate students with interpretive opportunities in a field setting through site tours, an on-line weekly journal of the excavations, and participation in projects targeted at improving the visitor experience at the Homol'ovi Ruins State Park. The educational and public outreach emphasis of HUROP also provided important opportunities for students to learn from and work with Hopi community members.

[31] *First Chair*

**Young, Stacey (New South Associates)**

[172] *PO-29 General Site Overview*

Eight major site areas or loci were identified during 2006 Phase II archaeological investigations at PO-29. They were described as a Midden Mound, Batey, Gully Top Midden and Features, Trench 6 Chican Ostionoid Midden and Features, Trench 7 Deeply Buried Midden, Trench 12 Midden, Scrape C and Historic Artifacts, and Scrape G Midden. These areas were identified by landscape features, discrete midden deposits, and subsurface features. During Phase III investigations in 2007, each locus was investigated by hand excavating a number of test units. This was followed by machine assisted scraping to document sub-surface features. As a result of these investigations, 407 features were identified including 80 burials, post holes, pit features, and various other features. A number of house or other structural patterns have been identified from preliminary analysis of feature data. As well, 318 stone slabs associated with batey wall alignments were identified.

[90] *see Thomas, Cynthia G.*

**Young, Tatiana (Temple University)**

[133] *New Insights into Hierarchical Dynamic between Sacalaca and Parcela Escolar, Quintana Roo.*

During the 2008 season, an approximately one kilometer-long transect was mapped between two previously studied sites – Sacalaca and Parcela Escolar - in the Coahuah region of Quintana Roo, Mexico. Two goals of the survey included: 1) to clarify if these two sites were a single aggregate or two distinct sites; and, 2) to determine hierarchical and spatial relationship between studied sites. Previous research proposed affiliation or some degree of dependence of Parcela Escolar to Sacalaca based upon territorial extent, the layout and makeup of the sites. The natural features of the landscape such as cenotes, caves, and deep soil pockets played a significant role in the political superiority and ranking of the sites. Therefore, variation and categories in the hierarchical levels can be hypothesized based upon spatial and temporal relationships of the sites and presence of prominent architectural components, and distinctive natural features. Recent findings, however, reflect a new dynamic in hierarchical and spatial relationship of the investigated sites.

**Yu, Pei-Lin (Ca. State U. Sacramento)**

[103] *the diamond effect: archaeology without archaeologists in broadcast media*

Popular scholarly broadcasts such as National Geographic and PBS increasingly draw on archaeology to bolster arguments about big issues like heritage or climate change. Non-archaeologists, of whom J. Diamond is an example, represent a growing sector of presenters in the television and dvd medium. In this presentation I will address the ways in which archaeology benefits from this trend, and how archaeologists can increase our influence in this sphere.

[7] *Second Organizer*

**Zaragoza, Diana (INAH)**

[111] *Spindle whorls: the magic of spinning*

One of the Huasteca region characteristics, at pre-Hispanic times, was their beautiful embroidered blankets, which were paid as tribute to Tenochtitlan; in the archaeological file, spindle whorls are the objects, that are preserved, and can be associated to this wonderful activity, which always has been bound to the Mesoamerican concepts, the presence of these utensils shows us; in its manufacture as in its decoration, a complex corpus of symbols. In the Huasteca, the variety of styles, that we can see through time and space; which I will treat in this presentation, talks about rich traditions in its territory.

[111] *First Chair [111] Second Organizer*

**Zaro, Gregory [64]** *see Houk, Brett A.*

**Zavala, Bridget and Antonio Reyes Valdez (INAH- Durango)**

[88] *Shamanic iconographic representations in iconography of the Chalchihuites of Durango, Mexico*

The ceramic types corresponding to the Ayala phase of the Chalchihuites archaeological tradition contain a series of iconographic designs that fuse representations of human and zoomorphic creatures. In some of the ceramic designs the artists display serpents with human heads and hands. This paper looks to recent ethnographic investigations among indigenous groups in Durango and the literature on ritual specialists to interpret the representation of these supernatural beings on the prehispanic plates.

**Zeballos-Velarde, Carlos Renzo**

[167] *Landscape 3d Modeling And Animation For Public Outreach And Education*

The Neolithisation in Japan during the Jomon Period involved two different stages: an earlier one (10000 BP – 5000 BP) characterized by a waterfront shell middens, and a later one (5000 BP – 3000 BP), defined by the development on trading networks and a more efficient exploitation of natural resources due to the use of complex technologies. Both stages influenced important changes in landscape (Uchiyama, 2003). By means of the database collected in the Lake Biwa area correspondent to the Jomon Period (Seguchi et al, 2008), this paper discusses the use of GIS analysis together with 3D visualization and animation techniques in order to share the information to the general public.

[167] *see Gillam, J. Christopher*

**Zedeno, Maria (University of Arizona)**

[94] *To Become A Mountain Hunter: A Study Of Resilience In The Blackfeet Indian Reservation, Montana*

The decade of 1880 marks the near extinction of the American bison and the lifeways it sustained. This paper examines the conditions under which a bison-hunting society coped with devastating ecological change, territorial circumscription, and repression by modifying their relationship with the landscape within culturally acceptable parameters. Among the Montana Blackfeet, resilience was achieved largely through the development of a post-bison hunting complex that involved rapid shifts to intensive high-elevation hunting of ungulates, concomitant change in the size and composition of hunting groups and hunters' social networks, and adjustment of ancient religious views and ritual practices to new hunting conditions.

[113] *see Anderson, Derek T.*; [131] *see Hollenback, Kacy L.*

**Zeidler, James (Colorado State University) and Richard Edging (CEMML, Colorado State University)**

[131] *Restoring a Presence: Steps toward a Co-future between the Dhegihan Tribes and the U.S. Army in Central Missouri*

This paper discusses on-going consultation efforts between the Fort Leonard Wood Military Reservation in central Missouri and Dhegihan-speaking tribes (Osage, Kaw, Omaha, Ponca-Nebraska, Ponca-Oklahoma) of the central Plains on issues related to the Native American Graves Protection and Repatriation Act of 1990 and Section 106 of the National Historic Preservation Act of 1966 (as amended). Detailed treatment of archaeological and linguistic evidence for Native American cultural affiliations in central Missouri has provided an important step toward restoring a Dhegiha presence in the area as well as establish a vision for future collaboration between the installation CRM program and Dhegihan tribes.

[131] *First Chair*

**Zeidler, James [29]** *see Miller, Pamela K*

**Zhang, Dongju [44]** *see Barton, Loukas W.*

**Zubrow, Ezra [143]** *see Hulse, Eva L.*